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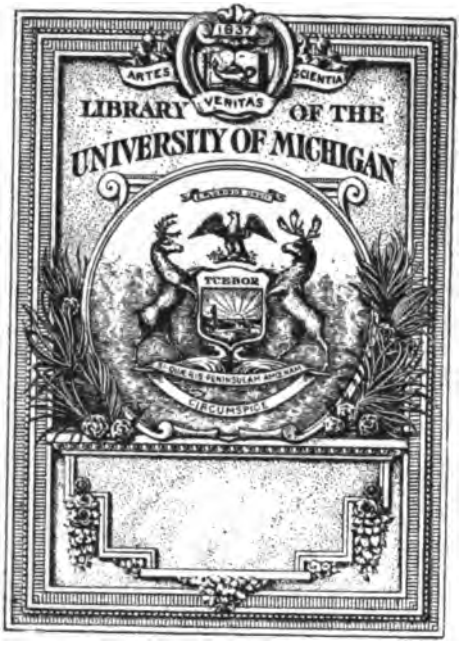

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EDITOR

VOLUME XI

OFFICIAL EXPLORATIONS FOR PACIFIC RAILROADS 1853-1855

BY

GEORGE LESLIE ALBRIGHT, M.A.

Native Sons Fellow in Pacific Coast History

UNIVERSITY OF CALIFORNIA PRESS
BERKELEY, CALIFORNIA
1921

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EDITOR'S NOTE

Soon after the completion of the present monograph Mr. Albright went to Spain to engage in research as Native Sons' Fellow in Pacific Coast History. A few weeks after his arrival in Seville he contracted typhoid fever, to which he succumbed in November, 1916, at the age of twenty-four. In his death the University of California lost one of her most brilliant alumni, and the State one of her best and most promising young citizens. Through the demise of the author, the editing of his book fell entirely into other hands.

The immense value of the work being supported by the Native Sons is well attested by such results as those set forth in this book by Mr. Albright. The desirability of promoting here in the West a study of the part played by the West in our nation's history is illustrated by a single sentence in Mr. Albright's monograph (p. 29): "The men who dominated this session [of Congress], and who placed the necessity of a Pacific railroad above sectional feelings and party creeds, were Senators Gwin of California, Rusk of Texas, Borland of Arkansas, and Bell of Tennessee"—all but one being men from this side of the Mississippi. Besides setting forth for the first time a systematic history of an important episode in the process of welding the nation and linking it with the Orient, Mr. Albright's study adds to the list of notable American explorers such names as Stevens, Gunnison, Beckwith, Whipple, Parke, Pope, Emory, Williamson, and Abbot.

For funds to supplement those of the University and thereby make possible the suitable publication of this book, thanks are due to Mr. Edward E. Ayer, of Chicago, and to Mr. Horace M. Albright, of Yellowstone National Park.

PREFACE

An episode in the development of the trans-Mississippi West to which but scant attention has been given in any history is the Pacific railroad survey of 1853–1855. This great reconnaissance deserves attention as the first attempt of the government at a comprehensive, systematic examination of the vast region lying between the Mississippi River and the Pacific Ocean. It is not intended to minimize in any way the labors of the fur-traders, the travelers, and the earlier government explorers, of whom Emory, Stansbury, and Sitgreaves must stand side by side with Fremont. Through their efforts there existed a good general knowledge of the West; but when it was proposed to locate a transcontinental railroad, the dearth of accurate scientific information was well recognized. All preëxisting knowledge was brought to bear upon a few routes which were advocated in definite plans. For that reason I have seen fit to discuss rather fully the different plans in order to show their intimate connection with the railroad explorations. My study has been based almost entirely upon the government documents, and an attempt has been made to study every document bearing upon the subject. The orthography of place names is usually that of the documents.

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CHAPTER I

INTRODUCTORY

A Direct Western Route to Asia.—The building of the Pacific railroad was the realization of the desire of almost four hundred years for a direct western passage to Asia. This desire expressed itself first in the search by sea for the mysterious Strait of Anian and for the Northwest Passage. With the occupation of the continent of North America the search was continued for a direct route by means of inland waterways. Every nation that was ever dominant over the interior was zealous for some means of establishing direct commercial intercourse with China and other countries of the Far East.

After the Sieur de la Salle had established himself at the Seigniory of St. Sulpice in 1668, his idea was, as his dispatches plainly show, that by following the Mississippi River to its source communication could be had with the waters of Oregon and the Pacific and the commerce of the Far East commanded by France through her province of Louisiana.[1] The name of this place, located at the Great Rapids of the St. Lawrence just above Montreal, was changed to La Chine and stands today as a memorial of La Salle's hope that the direct route to China lay in this direction.[2] Likewise, the explorations of the Vérendryes, La Harpe, Du Tisne, and Fabry were primarily for the purpose of establishing an inland commercial route across the continent.

When the Spaniards came into possession of Louisiana the expansion westward along the inland waterways continued. The officials of the province were greatly interested in opening a route to the Pacific.[3] Baron de Carondelet, governor-general

[1] Winsor, *From Cartier to Frontenac*, 213.
[2] Thwaites, *A Brief History of Rocky Mountain Exploration*, 22–23.
[3] Houck, *A History of Missouri*, I, 330, note.

from 1791 to 1797, undertook, with the approbation and sanction of Charles IV, the project of discovering a practicable route across the continent by way of the Missouri River. For this purpose he encouraged Jacques Clamorgan to organize in 1794 a Spanish trading company, to which was granted the exclusive traffic for ten years with all Indian tribes of the upper Missouri. In addition, a gratuity of two thousand dollars was promised to the first person who should see the Pacific Ocean.[4] This enterprise resulted in explorations far up the Missouri River.

The English, likewise, having failed in their long search for the Northwest Passage to Asia, turned their attention inland in search of a transcontinental route. After years of effort on the part of explorers of the Hudson's Bay Company, it remained for Alexander Mackenzie, of the rival Northwest Company, on his second attempt, to open an overland route to the Pacific in 1793. Although he reached the Pacific by means of the Tachouche Tesse, or Fraser River, he pointed to the Columbia as the only desirable route west of the Rocky Mountains. This was, without doubt, one cause of the long efforts made by the British Government, first, to make the Columbia River a boundary between the United States and Canada, open to both for navigation, and afterwards to obtain its free navigation. It was the desire of the British to establish an inland commercial route across North America.

The Americans meanwhile were not inactive in their desire to open up a commercial route to Asia. As early as 1783 Jefferson planned an expedition under the leadership of George Rogers Clark for the discovery of a path across the Rocky Mountains that would connect the Missouri River with the Pacific Tidewater.[5] Failing in this Jefferson in 1786 while in

[4] Houck, 329–330; Bolton and Marshall, *Colonization of North America*, 402.

[5] Thwaites, *Original Journals of the Lewis and Clark Expedition, 1804–1806*, VII, Pt. I, Appendix I.

Paris prevailed upon John Ledyard, who had been in Cook's expedition to Oregon in 1778, to cross from Kamtchatka and open up a route from the west.[6] Owing to Russian interference, Ledyard's expedition was a failure. Expeditions begun in 1790 under General Henry Knox and in 1793 under the French botanist, Michaux,[7] were alike failures. Even before the acquisition of Louisiana, Jefferson once more revived the idea of establishing an inland communication between the two sides of the continent, and sent out the well-known expedition of Lewis and Clark for that purpose. In his secret message to Congress on January 18, 1803, he states his desire to open a route to the Pacific, saying: "The commerce on that line [referring to the lakes and portages of the Hudson's Bay Company] could bear no competition with that of the Missouri, traversing a moderate climate, offering, according to the best accounts, a continued navigation from its source, and possibly with a single portage from the Western Ocean. . . ."[8] The objects of the expedition are more definitely stated in his letter of credit to Lewis of July 4, 1803, in which he refers to it as: "... the journey which you are about to undertake for the discovery of the course and source of the Missouri, and of the most convenient water communication from thence to the Pacific ocean."[9] The expedition was successful in finding a communication, but Jefferson did not remain in power to carry out the practical design.

Senator Benton, who for more than thirty years occupied a foremost position among the statesmen of the nation, as early as 1817 turned his attention to this subject, and conceived a plan for the establishment of a commercial route leading up the Missouri and down the Columbia rivers. He believed that Asiatic commerce might be brought into the valley of the

[6] Jefferson, *Writings* (Ford, ed.), I, 94–96.

[7] *Ibid.*, VI, 158–161.

[8] Thwaites, *op. cit.*, Appendix V.

[9] *Ibid.*, Appendix XX.

Mississippi on that line, and wrote essays to support the idea. The gist of these essays[10] was to show that Asiatic commerce had been the pursuit of all nations from the time of the Phoenicians and that America would be its final channel. He believed that such a route should be established immediately and with government aid. Being occupied with that idea he agitated it for many years; and from the hunters and traders of the west he sought information of the country with respect to capacity for settlement and especially as regarded mountain passes.[11]

Development of the West.—To the popular imagination of the first half of the nineteenth century, the vast region lying west of the Mississippi River was the "Great American Desert."[12] This idea persisted and the desert long remained as a frontier despite the fact that as early as 1819 settlement had reached the bend of the Missouri, and trade had been opened up with Santa Fé and the interior provinces of Mexico.[13] In 1843, an additional attraction was offered in Oregon, and another well worn trail was made from Fort Leavenworth along the Platte River, through South Pass, and down the Snake River into the Oregon country. Meanwhile, numerous exploring expeditions, official

[10] Benton, *Highway to the Pacific.*

[11] *Report*, 29 Cong., 1 sess., IV (491), no. 773; *Cong. Globe*, 30 Cong., 2 sess. (1848–49), XX, 470.

[12] This conception largely resulted from the observations of Major Stephen H. Long, who in 1819 and 1820 made explorations in this region and characterized it as "wholly unfit for cultivation, and of course uninhabitable by a people depending upon agriculture for their subsistence... the scarcity of wood and water, almost uniformly prevalent, will prove an insurmountable obstacle in the way of settling the country" (Thwaites, *Early Western Travels, 1748–1846*, XIV, 20).

Dr. James, the scientist of the Long expedition, rendered a similar unfavorable impression of the country: "...the want of timber, of navigable streams, and of water for the necessities of life, render it an unfit residence for any but a nomad population" (*ibid.*, 20).

[13] By 1824 this trade had risen to such magnitude as to demand national protection ("Extracts from the Speech of Mr. Benton in the Senate..., Session of 1824–25, in favor of opening a road from Missouri to Santa Fé, in order to reach the trade of New Mexico" in Benton, *Highway to the Pacific*, Appendix B).

and unofficial, were making known vast regions beyond the Mississippi. To call them to mind it is only necessary to mention the names of Long, Pilcher, Bonneville, Walker, Smith, and Fremont. Later in the forties, the discovery of gold in California attracted emigration across the Nevada desert and along the Humboldt into the Sacramento Valley. Other trails of approach were soon opened up for easy entrance into the gold region.[14] With the conclusion of the Mexican War and the acquisition of California, a new territorial problem was presented, which was made more difficult by the existence of the barrier of the "Great American Desert" between the new settlements in the Far West and those of the old East.[15] The trails leading into Oregon and California were inadequate, yet they "revealed the possibility and early necessity of railroad routes extending from ocean to ocean."[16]

Necessity of a Railroad.—At first the primary object of a railroad to the Pacific was to facilitate access to the opulent commerce of the Far East, which had been the golden vision of all ages and all nations. This was the aim of Whitney and all earlier advocates of a transcontinental route; every plan proposed was accompanied by a wealth of figures showing the commercial benefits to be derived from Asiatic trade. With the settlement of the Oregon boundary question and the acquisition of California in 1848, an additional incentive was provided for

[14] The most traveled route was the northern, leading from the Humboldt along the Truckee River to its source in Truckee Lake and thence down the Yuba to Feather and Sacramento rivers. The southern route led from Independence, Missouri, to Santa Fé, thence to deviate in various directions: by the old Spanish trail around the north banks of the Colorado, crossing Virgin River to the Mojave River and Desert and through Cajon Pass to Los Angeles; through Arizona along the Gila; down the Rio Grande and westward across the Sonora table-land to Yuma (Bancroft, *History of California,* VI, 155–157 and notes).

[15] Paxson, "The Pacific Railroad and the Disappearance of the Frontier in America," in American Historical Association, *Annual Report, 1907,* I, 108.

[16] *Ibid.*

the building of a means of rapid communication. This new territory on the Pacific must be adequately defended, and the cheapest and quickest means of defense was a railroad.[17] The fear was often expressed that unless some connection be maintained with Oregon and California, it was hardly to be expected that they would continue as a part of the Union.[18] Difficulties with England were believed possible by many statesmen, and in event of war it was feared that California and Oregon would be lost to her. The regular sea routes being cut off by the superior British navy, overland aid would arrive too late to be of service.[19] The fear of the British was greatly enhanced when, in 1851, a railroad was projected across Canada from Halifax to the Pacific, capital solicited, and a route surveyed as far as Quebec.

With the spread of settlement on the Pacific Coast it became necessary for the government to transport thither materials for the building of forts, dockyards, arsenals, etc. It also became necessary that mails be carried more rapidly, more frequently and more cheaply.[20] These needs pointed to a railroad as an immediate national undertaking.

[17] This argument was used in almost every speech in Congress in favor of a railroad to the Pacific from 1846 on. While discussion of the Oregon question was at its height, Representative Pratt, in presenting Whitney's first memorial, emphasized the necessity of a road "for the purpose of securing the American interests in the vast regions of Oregon, and promoting the capacities of our common country for warlike defence...." *Cong. Globe*, 28 Cong., 2 sess. (1844–45), XIV, 218; *ibid.*, 30 Cong., 2 sess. (1848–49), XX, 472; *H. Reports*, 31 Cong., 1 sess., III (585), no. 439.

[18] *Cong. Globe*, 30 Cong., 2 sess. (1848–49), XX, 381; *ibid.*, 32 Cong., 1 sess. (1851–52), XXV, 932; *ibid.*, 32 Cong., 2 sess. (1852–53), XXVI, 709; *H. Misc. Docs.*, 31 Cong., 1 sess., I (581), no. 21.

[19] *Cong. Globe*, 32 Cong., I sess. (1851–52), XXIV, 2466; "Memorial of the Little Rock Railroad Convention," in *S. Misc. Docs.*, 32 Cong., 2 sess. (670), doc. 5.

[20] In 1848, the tariff for mail from San Francisco to Independence was fifty cents each on letters and twelve and one-half cents on papers, the time of transit being sixty days. In 1852 the government was paying to the Collins line of steamers $750,000 per annum for the transmission of a semi-monthly mail by way of Panama to Oregon and California. It was estimated that the annual saving of expense to the government on all transportation, if a railroad were built, would amount to $62,750,000. *Cong. Globe*, 32 Cong., 1 sess. (1851–52), XXIV, 1272.

But, notwithstanding the pressing need (1) of diverting the profitable commerce of the Orient into American channels, (2) of defending the newly acquired possessions on the Pacific, (3) of facilitating communication with them, (4) of forestalling the evident designs of England upon the Oregon country, and (5) of protecting emigrants from Indian depredations and fulfilling the treaty obligations made to Mexico to protect her from Indian ravages, no plan for the building of a railroad could be agreed upon because of local prejudices and jealousies, the avowed enmity of the eastern states to any measure that would increase the power of those of the West, and party scruples regarding state rights and internal improvements.

Growth of the Railroad Idea.—The question of the original conception of railroad communication between the Atlantic and Pacific oceans does not come within the scope of this study. Such was the progressive nature of the American mind and its disposition to grasp conclusions at the very moment that the original premises were presented, at least as far as enterprise was concerned, that the idea of a passage across the continent must have occurred to many with the first successful railroad projects in the United States. But the scheme of a railway to the Pacific was one of such magnitude that notwithstanding the general conviction of its vast importance and the ardent desire to see it undertaken, it was, for many years, but infrequently urged upon the consideration of the people lest it be looked upon as too visionary and too impractical.

The project was first systematically brought to the attention of the people in the middle forties by the constant lobbying of Asa Whitney. Prior to that time, however, there had been several isolated suggestions that had failed of fruition. As early as 1832 there appeared in the *Ann Arbor Emigrant* the first printed suggestion as to the advisability of a railroad from New York to

the mouth of the Columbia River.[21] In 1834, Dr. Barlow of Greenville, Massachusetts, wrote articles proposing that the government construct a railroad to the Pacific Coast.[22] During 1836–37, John Plumbe, a Minnesota engineer, advocated the building of a transcontinental railway system. As a result of his activities, the first public convention ever held to discuss the Pacific railroad project met in Dubuque, Iowa, on March 31, 1838. Resolutions were drawn up asking Congress to aid by appropriating funds, and in due time were laid before that body by the territorial delegate. The only action taken by Congress was to set aside sufficient funds for a survey from Milwaukee to Dubuque. Again, in 1840, a memorial was addressed to Congress and presented by Plumbe in person. But he was far ahead of his time and his efforts were wasted.[23]

Even as late as 1846 the building of a railroad to the Pacific was regarded by most people as a vague chimera. This can be seen from the following comment made upon the proposal to extend a line of railroad from Charleston, South Carolina, to Natchez and on to the Gulf of California: "We are to be sure, first, that we have Oregon and California to work so largely upon. It is not our intention to dampen the ardor of those who appear to be so far beyond the age, knowing as we do that the enterprise and the resources of our people are without limit, and that the developments among us for the past few years have outstripped all calculation. We leave the Texas and California railway, then, as one of those achievements which is reserved for us at some other period, when we have conquered all the obstacles which obstruct our free intercommunication at home. Texas, we know, will soon be able to take care of herself; and California is at best a distant vision whose dim outlines only can be traced."[24]

[21] Carter, *When Railroads Were New*, 227; Bailey, *The First Transcontinental Railroad*, 11–12.

[22] Haney, *Congressional History of Railroads to 1850*, 402–403.

[23] Carter, *op. cit.*, 227–228.

[24] *De Bow's Commercial Review*, January, 1846 (I, 23–24).

By the early inhabitants of the Pacific territories, those who knew best the actual condition of the country west of the Mississippi, a railroad was likewise regarded as chimerical. The editor of the *California Star*, writing in 1848, while favoring any plan for a railroad, would "not consent to view 'this stupendous project' practicable, nevertheless, for a number of years to come.... The depredatory acts of intractable Indians, directly through whose country the route lies, is one of a series of obstacles to the actual execution of the work."[25]

[25] *California Star*, May 20, 1848 (II, no. 20).

CHAPTER II

PLANS FOR TRANSCONTINENTAL ROADS

The man to whom most credit is due for the spread and national acceptance of the idea of a railroad to the Pacific is Asa Whitney, of New York. He embodied and reduced the indefinite schemes on the subject into something like system; and he gave them form and substance. He familiarized the American mind with the idea and taught that it should be regarded as a practicable measure. He conceived the first definite, matured plan, and pointed out the route to be followed, the means of construction, and the immediate necessity of the work. His proposal, first made public in 1844, was for more than eight years persistently urged upon the attention of Congress and the people, but was doomed, however, to failure in the end. The service of Whitney to the whole Pacific railroad project can best be shown by quoting from the report of the House Committee on Roads and Canals, to which one of his memorials had been referred: "Mr. Whitney has been unremittingly engaged, at his own expense, since 1841, in collecting information on the subject... and we are indebted to him for the origination of the project, for the maturity of the first plan, for the large amount of practical information he has brought to bear upon the subject, and for the awakening of public attention to its importance."[1] The history and the importance of his plan will be more fully treated later.

Unofficial Plans for a Southern Route.—No sooner had Whitney's plan for a northern road from Lake Michigan to Oregon been presented to Congress[2] than numerous suggestions and

[1] *H. Reports*, 31 Cong., 1 sess., I (583), no. 140.

[2] His first memorial was presented January 28, 1845, by Representative Pratt of New York. *Cong. Globe*, 28 Cong., 2 sess. (1844–45), XIV, 218.

proposals were made for a southern route. Colonel Gadsden, president of the South Carolina Railroad Company, was among the first advocates of a strictly southern railroad. In a report made by him at the Memphis Convention, held in November, 1845, and of which John C. Calhoun was chairman, he recommended the enterprise as one not only practicable, but in the process of time as certain of execution. In his annual report for 1845 to the stockholders of the South Carolina Railroad Company, he again presented the subject, accompanied by a map exhibiting the intimate relation between the route of the road as suggested by him and those completed and in progress through the different states of the Union.[3]

Other early advocates of railroad routes through southern territory were Robert Patterson,[4] editor of the *Concordia Intelligencer*, and Professor Forshey, of Louisiana. The route suggested by the latter was the one most in favor in the South. It traversed Louisiana from Vidalia to Lowe's Ferry on the Sabine, thence directly across Texas to the Rio Grande, at Presidio, thence to Monclova, and then by way of Parras to Mazatlan on the Gulf of California. The estimated length of this route was 1,491 miles and its estimated cost, $22,000,000.[5]

[3] *De Bow's Commercial Review*, May, 1847 (III, 447); *ibid.*, June, 1847 (III, 485): "In connection with these Atlantic railroad communications with Vicksburg, Grand Gulf and Natchez; crossing the Mississippi at one or all of these points, roads are already projected, looking further to the west, which, uniting *on a common trunk*, in the rapid progress of southwestern expansion and emigration, will, in time, be made to course through the new acquired territory of Texas, and by the Mexican provinces to a terminus at Mazatlan, in the bay of California, or, taking a more northerly direction by the valley of the Red and Arkansas rivers, may easily pass by the southern gorges in the Stony Mountains, and find, in the course of events, *certain*, though *slow*, a more favorable location in the imposing Bay of San Francisco."

[4] He urged the building of a railroad from Vidalia on the Mississippi River to Alexandria on the Red, and thence continuing the road westward. *De Bow's Commercial Review*, March, 1846 (I, 281).

[5] *Ibid.*, 475–483. It was urged at this time that the right of way through Mexican territory be demanded of that country. Two years later, by the treaty of Guadaloupe Hidalgo, Article VI provided that by mutual agreement a railroad could be built on Mexican soil, but only within one marine league of the Gila River.

A different southern line was proposed by General Houston. It was to run from Galveston to San Diego by way of the Gila Valley. This route, however, had the disadvantage of having its eastern terminus located too far south.[6]

Leaders of public opinion in the South held firmly to the view that any of the southern routes proposed was infinitely more practicable, desirable, and accessible to the country at large than that proposed by Asa Whitney from Lake Michigan "through cold and mountains, 2600 miles to the mouth of the Columbia River."[7]

Among those who early migrated to California by way of the southern routes, were some who recognized and advocated the feasibility of the construction of a railroad. The *California Star* of May 8, 1847, contains an article signed "Agricola," in which was delineated a route asserted to be entirely practicable for that purpose. The western terminus should be placed near the mouth of the San Joaquin River, about twenty miles above the Straits of Carquinas; the route should then follow the valley of the river to the south about five hundred miles, skirting the western shore of "Lake Buenavista."[8] After crossing "a narrow ridge of low hills," the route was level and open to the Red, or Colorado River of the West. The valley of this river should be followed to that of the San Juan, thence up the latter to the Rio de la Plata. Following this river to its source about ninety miles from Abecu,[9] thence to Abecu and along the river of that name (Chama) to the Rio Grande and thence to Santa Fé; the route was entirely practicable for a railroad. From Santa Fé to the Missouri, or to the Mississippi, several well-known routes were

[6] *Ibid.*, July, 1849 (VIII, 19–20). Houston urged his plan upon the attention of Congress, but it was received with little favor. *Cong. Globe.*, 30 Cong., 2 sess. (1848–49), XX, 551.

[7] *De Bow's Commercial Review*, February, 1847 (III, 147–148).

[8] Undoubtedly the "Laguna Grande de los Tulares," which lies to the north of the small Lake Buenavista.

[9] Abiquiú.

then available.[10] It was generally conceded in California by persons possessing a knowledge of the country through actual observation, that the southern route had claim to manifold advantages and was superior to that through South Pass proposed by Whitney, Wilkes, and others.[11]

The Whitney Project.—Despite agitation in the southern states and in California for a southern route, the project of Asa Whitney was the only one long to receive the serious consideration of Congress and the national support of the people. He offered facts and figures to show the practicability of his route, the adequacy of the means proposed, and the immense commercial benefits to be derived. The fact that its western terminus was in the recently settled Oregon country gave it an added interest and desirability. Whitney's plan was first presented to Congress in January, 1845, but no definite action was taken concerning it by the House Committee on Roads and Canals to which it was referred. However, a favorable report was made by the committee,[12] which recognized the immense importance of the work and urged further investigation. In February, 1846, Whitney having meanwhile examined the proposed route for several hundred miles west of the Mississippi and found it entirely practicable,[13] a second memorial was presented.[14]

Since Whitney's plan was received with such widespread favor and the means proposed were thought for so long a time

[10] A route very similar to that of "Agricola" was urged in 1848 by John Marsh, of San José, and its advantages over that proposed by Whitney pointed out. *The California Star*, May 13, 1848 (II, no. 19).

[11] *The California Star*, May 20, 1848 (II, no. 20). The great immigration to California during 1849 and 1850 concentrated attention on other routes than the southern. Added information on all routes caused many in California to advocate the central as the most practicable, particularly as San Francisco would be its western terminus. *Daily Pacific News*, April 27, 1850 (I, no. 130).

[12] *H. Reports*, 28 Cong., 2 sess. (468), no. 199.

[13] *S. Docs.*, 29 Cong., 1 sess., IV (473), doc. 161.

[14] *S. Journal*, 29 Cong., 1 sess. (469), 161.

to be the only constitutional ones, a paragraph may well be devoted to the details as presented in his second memorial. Whitney asked for a strip of land, thirty miles wide on either side of the line from Lake Michigan to the Pacific Ocean by way of South Pass, or, according to his estimate, a total of 77,952,000 acres. These lands were to be set apart and sold to him at the rate of ten cents per acre. Whitney proposed first, however, to survey and build ten miles of road at his own expense; then, if approved by the government, he would receive one half of the reserved lands, or a strip five miles by sixty in width, to reimburse himself and enable him to commence a new section of ten miles. This process was to continue for each ten mile section until the first eight hundred miles were completed. Whitney believed that the lands of the remaining distance were of too little value to defray the cost of construction. Accordingly, the remaining half of the lands of the first eight hundred miles were to be sold under government supervision and the proceeds applied to the completion of the railroad to the Pacific. By this means, the building of the road was closely connected with the sale and settlement of the public lands. Whitney estimated the cost of the road, including $7,800,000, the amount to be paid by him for the land, at $68,400,000. He advocated private ownership and operation, greatly restricted, however, and under adequate government control in the fixing of rates, etc.; mails and troops were to be transported free of charge to the government.

Whitney continually urged haste, for the desirable lands west of the Mississippi River were rapidly being occupied. In fact, he soon was compelled to change his proposed eastern terminus from Lake Michigan to Prairie du Chien, the good lands in Wisconsin Territory having been occupied.

It is not necessary to trace in detail the course of Whitney's plan in Congress.[15] His second memorial, presented in 1846, was referred to the Senate Committee on Public Lands, the full and able report of whose chairman, Mr. Breese, of Illinois, was accompanied by a bill, as a form of law, to carry it into effect.[16] Despite the recognized importance of the measure, there was violent opposition made to the printing of the bill and the report. This opposition was led by Senator Benton, who characterized the bill as "ridiculous."[17] His motives are easily discerned: he was interested in an isthmian canal scheme projects for which continually rivalled those for a Pacific railroad; also he was perfecting a plan which should have the eastern terminus of the Pacific railroad in his own favorite state, Missouri.

In the first session of the thirtieth Congress (1847–48), the select committee of the House, which had been appointed to consider the various memorials for a railroad to the Pacific, and to which Whitney's proposition had been referred, early reported a bill to set apart and sell to him a portion of the public lands.[18] The same committee, later in the session, made a more lengthy report, setting forth the great importance of the project and urging its adoption.[19] At the same session it was referred to a select committee in the Senate, of which Mr. Niles, of Connecticut, was chairman, who, with the unanimous approval of the committee, reported a bill and urged its adoption.[20] Benton, as before, headed the opposition to the bill, saying: "We must have surveys, examination, and exploration made, and not go blindfold into a scheme."[21]

[15] Whitney's plan has been dealt with in detail in many secondary accounts: E. V. Smalley (*History of the Northern Pacific Railroad*) devotes a chapter to his project and Haney (*op. cit.*) makes an exhaustive study of it from the sources.

[16] *S. Ex. Docs.*, 29 Cong., 1 sess., IX (478), doc. 466.

[17] *Cong. Globe.*, 29 Cong., 1 sess. (1845–46), XV, 1171.

[18] *H. Journal*, 30 Cong., 1 sess. (513), 755.

[19] *H. Reports*, 30 Cong., 1 sess., III (526), no. 733.

[20] *Cong. Globe*, 30 Cong., 1 sess. (1847–48), XVIII, 875.

[21] *Ibid.*, 1011.

While Whitney's plan had been more or less gaining favor in Congress, he had been touring the country and explaining his project to state legislatures and numerous large public meetings. The effects of this widespread and systematic campaign were soon evident, for memorials and petitions began to pour in upon Congress, favoring his plan of construction. During 1847 and 1848, the state legislatures of Indiana, Rhode Island, Illinois, New York, Connecticut, Maine, Vermont, Georgia, Tennessee, Alabama, Maryland, New Jersey, Ohio, Kentucky, Pennsylvania, North Carolina, and Michigan, in most cases by unanimous votes, passed resolutions declaring it "the only feasible plan for the accomplishment of the work," recommending its immediate adoption, and requesting their delegates in Congress to give it their prompt attention and support.[22]

Public meetings held during the years 1846 to 1848 at Pittsburgh, Cincinnati, Louisville, St. Louis, Terre Haute, Indianapolis, Dayton, Columbus (Ohio), Wheeling, Philadelphia, and Benton (Miss.), endorsed Whitney's project as necessary and practicable. The question was given calm and favorable consideration in the South as well as in the North.[23] Although a more southern route than that proposed by Whitney was desired by the southern people, at the same time the practicability and great commercial value of the latter was never doubted, and it was believed that in its plan and details it embraced the only constitutional mode of effecting the work.[24]

The various petitions and memorials of state legislatures and public meetings were, in the first session of the thirtieth Congress (1847–48), referred to the Senate Committee on Public Lands, and a report was made June 26, 1848. No action was taken on

[22] *S. Misc. Docs.*, 30 Cong., 1 sess. (511), nos. 1, 4, 5, 18, 28, 29, 51, 58, 76, 77, and 124; *H. Misc. Docs.*, 30 Cong., 1 sess. (523), nos. 17, 47, 55, 68, 75, etc.

[23] *De Bow's Commercial Review*, January, 1848 (V), 60.

[24] *Ibid.*, December, 1850 (IX), 601.

Whitney's plan, but the committee recommended the adoption of a joint resolution providing for a survey and exploration, under the direction of the Secretary of War, of one or more routes for a railroad from the Mississippi below the Falls of St. Anthony to the Pacific.[25] This seems to be the first recognition of the importance of thorough surveys before any plan of construction could be matured.

During the short session of the thirtieth Congress (1848–1849) that body was occupied in framing a bill for the government of California, to the exclusion of almost all other matters. When, however, Senator Niles wished to take up the Whitney bill and make it the special order for a certain day, he was opposed by Borland, chairman of the Committee on Public Lands. The latter emphasized the necessity of adequate surveys before either the government or private parties should undertake the work; and finally he secured an amendment to the Whitney bill authorizing the Secretary of War to cause surveys to be made on such routes as he might deem proper from the Mississippi River to the Pacific.[26] Senator Benton again expressed himself as opposed to Whitney's or any other private enterprise, and, later in this session, he introduced his proposal for a national central highway.[27]

In March, 1850, the House Committee on Roads and Canals made a lengthy report, approving the plan and route of Whitney and a bill was reported to give effect to the views of the committee.[28] At the same session, the whole subject was referred to the Senate Committee on Roads and Canals, and again the adoption of Whitney's plan was recommended.[29]

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[25] *S. Reports*, 30 Cong., 1 sess. (512), no. 191. No action was taken, however, on the recommendation at this time.

[26] *Cong. Globe*, 30 Cong., 2 sess (1848–49), XX, 381.

[27] *Cong. Globe*, 30 Cong., 2 sess. (1848–49), XX, 472.

[28] *H. Reports*, 31 Cong., 1 sess. I (583), no. 140.

[29] *S. Reports*, 31 Cong., 1 sess. (565), no. 194.

Whitney's great project was a failure, despite the many favorable committee reports and innumerable memorials urging its adoption by Congress. But for these he was more indebted to the great anxiety that prevailed throughout the country for speedy and cheap communication with the vast interests on the Pacific Coast, than to any merit pertaining to the location of the proposed road or the details of his scheme. As other plans and other routes developed, Whitney and his project became less and less popular. When, in the winter of 1851–1852, Whitney asked for the use of the Hall of the House of Representatives in order to explain there his project he was twice refused; and only by a bare two thirds majority were the rules finally suspended and permission granted him in January, 1851.[30] As opposition to Whitney's proposal became more widespread, petitions were addressed to Congress, asking that no action be taken upon it. In March, 1852, the citizens of Sacramento County, California, in a memorial, opposed the plan, both as to route and means of construction, and remonstrated against its adoption.[31]

Final official discussion was held on this historic project in 1852. In January of that year a House committee reported, favoring the means proposed and the general route, substituting Memphis, however, as the eastern terminus.[32] In April the Senate Committee on Post Office and Post Roads, to which his final memorial had been referred, made a favorable report.[33] Its chairman, Senator Rusk, of Texas, stated that while the bill was not entirely acceptable to him, the matter was of such vast importance, especially to the frontier sections, that quick action was necessary. The bill was strongly opposed, however, by the adherents of a national road, among them Senator Gwin, of California, and was tabled, to receive no further official consideration.

[30] *H. Journal*, 31 Cong., 2 sess. (594), 82; 136–138.
[31] *S. Journal*, 32 Cong., 1 sess. (610), 247.
[32] *H. Reports*, 32 Cong., 1 sess. (656), no. 101.
[33] *Cong. Globe*, 32 Cong., 1 sess. (1851–52), XXIV, pt. 2, 942.

If we inquire into the reasons for the failure of the Whitney plan, we find them to be manifold. It was opposed by those skeptical people who would have decried any plan of transcontinental communication as too vast, impracticable, and impossible. It was asserted that there was not sufficient business to sanction and keep up a railroad and that tolls would necessarily be so high as to exclude business. Whitney was opposed on the grounds that he asked for too large a grant of land and that he sought to gain power through the control of the enterprise. In addition he was opposed by those persons interested in other schemes, especially by those engaged in exploiting isthmian routes and in speculating in soldiers' land warrants.[34]

Sectional and local interests and jealousies reared themselves in opposition in order to impede action upon the project and defeat this first feasible plan for the accomplishment of the enterprise. Such jealousies were essentially local, such as one city striving for recognition over a neighboring city as the terminus of the road. The South generally favored Whitney's scheme from the beginning, as against no road at all.[35] It was there considered in its purely national aspects in which each part of the country was to share equally.[36] Whitney's was the only project that did not rely directly or indirectly upon the public treasury for means, which dependence would never be sanctioned by the South.[37] There was, likewise, no other route which could furnish an adequate amount of public land to induce Whitney to undertake the work. It was shown to be to the interest of the southern states to build a road or roads east of the Mississippi River, connecting with the northern transcontinental route. Without doubt, the South hoped for and

[34] *H. Reports*, 31 Cong., 1 sess., I (583), no. 140, p. 10.
[35] *De Bow's Commercial Review*, December, 1850 (IX, 601).
[36] *Ibid.*, October, 1847 (IV), 164; 175.
[37] *Ibid.*, 612.

desired a southern route, but not to the extent of opposing and conniving at the defeat of a northern one. Should the North be given the first route, it would be but a few years until the South must, likewise, secure one.[38]

Benton's National Central Highway.—In opposition to the project of Whitney for private construction and ownership, Benton advocated a railroad to be built and operated by the government. His plan was first proposed in February, 1849,[39] but did not take the form of a bill until the following year.[40] Benton proposed that a strip of land one hundred miles in width be reserved from St. Louis to San Francisco, an estimated distance of sixteen hundred miles. He suggested that the road should be built along the main branch of the Kansas River, and the upper waters of the Arkansas and Huerfano rivers, and thence continue through Utah Pass, about three degrees south of the South Pass, to the headwaters of the Rio del Norte. After crossing the Great Basin the route would traverse the Sierra Nevada Mountains near their center, or turn them to the south and proceed thence to San Francisco. This central route was known to Benton through the explorations of his son-in-law, John C. Fremont. Benton's bill further provided that strips of land, fifty miles in width and five hundred miles long, should be reserved for the construction of branch roads starting from the Great Basin, one to Santa Fé and one to the mouth of the Columbia. The railroad should be built and owned by the government, being national in form and use. To provide means for construction, Benton advocated the use of the income from customs duties, the proceeds from the sale of public lands in California, New Mexico, and Oregon, and loans in anticipation of these resources. His project comprised the setting apart and

[38] *De Bow's Commercial Review*, December, 1850 (IX, 601).
[39] *Cong. Globe*, 30 Cong., 2 sess. (1849–50), XX, 472.
[40] *Ibid.*, 31 Cong., 2 sess. (1850–51), XXIII, 56–58.

sale of approximately one hundred and fifty millions of acres, or almost double the amount asked by Whitney.

Benton's bill provided that all information bearing on the central route should be collected by the government and that further examinations and surveys should be authorized by the President. This plan was as arbitrary in fixing the route of the proposed railroad as was that of Whitney and was opposed on the same grounds.

The bill further provided that as soon as the route should be definitely located the President should cause the Indian titles to the land to be extinguished. For this purpose and that of the surveys, $300,000 was to be appropriated from the national treasury.[41]

While previously the people, generally, had accepted the idea of private construction of the railroad, the national method now gained in popularity, and Benton's project secured many adherents. The Secretary of the Interior, in his report made December 2, 1850, favored Benton's national scheme, but emphasized the necessity of a careful survey of the country and its resources before fixing the route.[42] Numerous petitions were presented from all sections of the Union urging the construction of a national highway as a national necessity.[43]

Benton, however, was soon to retire from Congress, and the project, deprived of the powerful support which he alone could give it, was superseded by others which promised more definite action. The national scheme, likewise, had its enemies in Congress, who saw and feared in that method of construction and

[41] For further details of the Benton project see *Cong. Globe*, 31 Cong., 2 sess. (1850–51), XXIII, 58.

[42] *Cong. Globe*, 31 Cong., 2 sess. (1850–51), XXIII, Appendix, p. 7.

[43] The state of California sent resolutions to Congress for a national road, urging, however, the necessity of complete surveys to determine the most practicable route. *Cong. Globe*, 31 Cong., 2 sess. (1850–51), XXIII, 132. For other memorials see *Cong. Globe*, 32 Cong., 1 sess. (1851–52), XXIV, pt. 1, pp. 4, 21; *H. Journal*, 31 Cong., 1 sess. (566), 1471; *S. Journal*, 31 Cong., 2 sess. (568), 46.

operation a powerful political machine and a national source of corruption.[44]

The Memphis and St. Louis Conventions.—The increasing importance of the Pacific railroad project from 1849 on is demonstrated by the numerous meetings held in almost every state of the Union. As a result of these meetings memorials, petitions, and resolutions were addressed to Congress, all of which urged prompt action.[45] Different termini and routes were advocated as well as different means of construction, but all were agreed that a railroad should be provided for at once.

Two meetings held in the fall of 1849, one at Memphis and the other at St. Louis, attracted widespread attention and presented plans and routes of sufficient bearing to be treated somewhat at length.

Delegates from twelve southern states and several northern and western states met at Memphis in October, 1849, to discuss the question of a transcontinental railroad and to urge upon Congress the necessity of immediate action.[46] Lieutenant Maury, superintendent of the National Observatory at Washington, and a man well informed upon the western and Pacific regions, was elected president. Resolutions were drawn up stating: first, that it was the duty of the general government to provide at an early period for the construction of a national railroad from the Mississippi River to the Pacific Ocean; second, that engineers should be appointed and surveys and the location of the route be completed by the general government; third, that for the construction of the road the public lands constituted a proper fund, and that it was the duty of Congress, after the building of the

[44] *Cong. Globe,* 31 Cong., 1 sess. (1849–50), XXII, Appendix, pp. 329–336.

[45] *S. Journal,* 31 Cong., 1 sess. (548), 32, 47, 93, 110, 236, 254, etc. *Ibid.,* 31 Cong., 2 sess. (586), 59, 113, 126, etc. *H. Journal,* 32 Cong., 1 sess. (632), 189, 208, etc.

[46] *De Bow's Commercial Review,* March, 1850 (VIII, 217).

main trunk road, to aid by an appropriation from the national domain in the construction of branch railroads to connect with the Great Lakes and the great thoroughfares leading to the Atlantic, and also to aid in the construction of branches from the main trunk to suitable points on the Gulf of Mexico; and fourth, that in the event of the appropriation by Congress of a considerable portion of the public lands, or of the proceeds of the sales thereof, to the construction of a railroad, liberal appropriations of the public lands lying within the limits of the respective states should be made to aid in the construction.[47]

The proposed route, as advocated by the Memphis Convention, would commence at the port of San Diego, pursuing a direct line to the Colorado River; thence to the Gila and along the valley of the latter to El Paso del Norte; thence across the state of Texas to its northeastern boundary near the thirty-fourth parallel of north latitude, and terminating at some point on the Mississippi River between the mouth of the Ohio and the mouth of the Red, preferably at Memphis.[48]

The memorial of the Memphis Convention was referred to the House Committee on Naval Affairs, which reported August 1, 1850. The report of its chairman, Mr. Stanton, embodied the entire memorial and was accompanied by a bill providing for

[47] *De Bow's Commercial Review*, December, 1849 (VII, 551–552).

[48] *Ibid.*, March, 1850 (VIII, 229). *H. Reports*, 31 Cong., 1 sess., 1849-50, III (585), no. 439, pp. 12–13. This was substantially the route advocated several years before by Colonel J. J. Abert, chief of the Topographical Engineers, and Colonel Hughes of the army. They proposed that a railroad commence at San Diego on the Pacific, run to the Colorado and along its affluent, the Gila, to a point near its source; then pass into the valley of the Rio Grande del Norte, keeping within the jurisdiction of the United States. From this point, the line would pass through Texas to Nacogdoches, where Abert proposed a bifurcation of the road—one branch to run nearly direct to the Mississippi above the mouth of the Red. A slight deflection would carry it to Vicksburg or Memphis, as might be deemed most expedient. The northern branch would cross the Red River at the great bend or vicinity; then, crossing the Arkansas River at Little Rock, pursue its course to St. Louis.

the survey of the proposed routes for a railroad across the continent.[49]

The St. Louis Convention, with similar objects in view, met in the same month and was attended by delegates from both northern and southern states. The guiding spirit of the meeting was Senator Benton, and it was due primarily to his influence that the following resolutions were passed: (1) "That, in the opinion of this convention, it is the duty of the General Government to provide, at an early period, for the construction of a central national railroad from the valley of the Mississippi to the Pacific ocean"; and (2) "That, in the opinion of this convention a grand trunk railroad, with branches to St. Louis, Memphis and Chicago, would be such a central and national one."[50] To avoid state and local prejudices the Convention proposed that the government should confine its operations to the territory beyond the limits of the states, leaving the various branches to be built by the states through liberal grants of government lands. The Convention also urged the necessity of a thorough survey of all routes that might be considered practicable.

The memorial of the St. Louis Convention was presented to the Senate on January 3, 1850, by Vice-President Fillmore. Benton, however, moved that the memorial be laid on the table, which was concurred in.[51] He thus made the way clear for his own national project which he was just at that time perfecting.

These two conventions may be said to represent local interests. The people of St. Louis and of the adjacent country urged that city as the only suitable starting point, while the citizens of Memphis as strongly supported her position. Mr. Robinson, chairman of the House Committee on Roads and

[49] *H. Reports*, 31 Cong., 1 sess., III (585), no. 439.

[50] *De Bow's Review*, December, 1849 (VIII, 551); also in *Cong. Globe*, 31 Cong., 1 sess. (1849–50), XXII, Appendix, pt. 1, p. 335.

[51] *Cong. Globe*, 31 Cong., 1 sess. (1849–1850), XXI, pt. 1, p. 97.

Canals, in making his report in 1850, favorable to Whitney's plan, took occasion to point out the weaknesses in the projects submitted by both conventions: "They have pointed out no *means* of executing their respective plans, except by dependence on the national treasury; and the committee think, that if those conventions had been brought to the question of means, they would have been confounded. None can deny that this is the *sine qua non* of questions on this subject.... The question of means falls to the ground on any other plan than that of Mr. Whitney... the government, itself, would sink under the attempt to build this road on any other plan."[52]

Mills' Central Route to the Pacific.—A route similar to that recommended by the Memphis Convention was in May, 1852, urged upon Congress by the memorial of Robert Mills.[53] Mills had given the subject serious consideration for years, and had long sought to arouse and fix public attention upon it with a view to a practicable result. As early as 1847, he had mapped out a definite route and asked for a survey by the government.[54] In his memorial he emphasized the necessity of immediate action, believing that sufficient information had been gathered from previous explorations to map out a practicable route. He proposed two main eastern branches, the terminus of one being at St. Louis, which would connect with all roads coming from the north, east, southeast, and as far south as Richmond, and that of the other at Memphis, which would connect with all southern railroads. After uniting near Van Buren on the Arkansas River, the main trunk would follow a direct line to El Paso del Norte, and thence by way of the Gila Valley to San Diego. Mills believed that the Gila route would prove more advantageous, even to San Francisco, than one by the Great

[52] *H. Reports*, 31 Cong., 1 sess., I (583), no. 140.
[53] *S. Journal*, 32 Cong., 1 sess. (610), 390.
[54] *S. Misc. Docs.*, 30 Cong., 1 sess., I (511), doc. 51.

Basin and Sacramento Valley, eight degrees further north. He proposed that the work be national in construction and ownership and urged that surveys be made so as to judge of the route "that would centralize advantages and give to each state an equal chance through branch connections."

The Committee on Public Lands, to which his memorial had been referred, while not endorsing Mills' views entirely, in making its report[55] rated them as worthy of respect and recommended their publication as a contribution to desirable knowledge upon the subject. The committee deplored the fact that up to that time no information had been obtained of a character or in amount sufficient to determine such a route and justify Congress in taking definite action for its location and construction.

A Southern Atlantic and Pacific Road.—A southern route to the Pacific, though long urged in the South, had received no consideration in Congress until 1852. In that year, the House Committee on Public Lands proposed, by a bill, to continue the southern chain of railroads west from Vicksburg to Shreveport on the Red River and thence to the Texas line. A survey of this route, from the Mississippi across Louisiana to the great bend of the Red River, had been made in 1850 by W. H. Sidell under the direction of the federal government,[56] and the route had been found to be feasible. In pursuance of an order of the War Department, an accurate survey of the country from Preston on the Red River, through to El Paso del Norte, had been made by Captain Marcy,[57] and its advantage as a railroad route pointed out by him.[58] Moreover, the legislature of Texas had granted a right of way and a strip of land eight miles

[55] *S. Reports*, 32 Cong., 1 sess., II (631), no. 344.

[56] His report was made to the Secretary of War, Nov. 30, 1830. *S. Ex. Docs.*, 31 Cong., 2 sess., V (591), doc. 42.

[57] An account of this expedition is given in *S. Ex. Docs.*, 31 Cong., 1 sess., XIV (562), doc. 64.

[58] *Ibid.*, 227.

in width for the entire length of the state for a railroad. From El Paso del Norte Major Emory had made an examination west to San Diego,[59] and had found that it presented no obstacles. He said that "San Diego should be made the terminus of a railroad leading by the route of the Gila to the Del Norte, and thence to the Mississippi and Atlantic." In addition, the explorations of Major Cook and those of Bartlett and the Boundary Commission demonstrated the directness and practicability of a railroad from El Paso to San Diego.

With these facts to work upon, a southern Atlantic and Pacific railroad was proposed by Mr. Freeman, chairman of the Committee on Public Lands. He urged that Congress donate to California and New Mexico a strip of land, thirty miles in width on each side of the road, so that the governments of these territories could control the construction of the railroad.[60] He would, in that way, avoid the objection of establishing a system of internal improvements within a state by the central government. The immeasurable benefits to be derived he sums up in one sentence: "As a national work, it will cement the mutual affections of our people, and bind together the union of our States by all the inducements that can excite a common interest, and that can elevate national pride, and perpetuate national fame."[61]

Thus, by 1852 there had been six distinct routes especially urged upon Congress: (1) that projected by Asa Whitney from Lake Michigan through South Pass, to the mouth of the Columbia

[59] *S. Ex. Docs.*, 30 Cong., 1 sess., III (505), doc. 7, p. 113.

[60] The federal government possessed no lands in Texas. All lands had belonged to her as an independent republic and she had retained them on entering the Union.

[61] *Cong. Globe*, 32 Cong., 1 sess. (1851–52), XXIV, pt. 2, 1274. Later Freeman called upon the South to stand together and bring to themselves "the great commercial axis of the world, and thereby render themselves, and their posterity forever, independent of all combinations against their peculiar institutions—their social happiness, their individual wealth, and their political power as independent states" (*ibid.*, XXV, Appendix, p. 933).

River, with a branch to San Francisco; (2) Senator Benton's route from St. Louis to San Francisco through some pass to be discovered in the mountains south of South Pass and near the sources of the Arkansas River; (3) the route of the St. Louis Convention of 1849, very similar to Benton's, but traversing South Pass; (4) the route indicated and especially recommended for survey by the Memphis Convention, from San Diego by way of the Gila Valley and El Paso del Norte, crossing northern Texas to Memphis; (5) Mills' route from Van Buren to El Paso del Norte and San Diego, with eastern branches to Memphis, St. Louis and Vicksburg, and western branches to Monterey and San Francisco; and (6) the Atlantic and Pacific railroad route from Vicksburg direct to El Paso del Norte and San Diego.[62]

As there had been many routes proposed, the means of construction advocated were likewise varied: (1) the road might be privately constructed from a grant of the public lands as Whitney proposed; (2) it might be built by the loan of the government credit to a company incorporated for the object;[63] (3) it might be accomplished by setting apart a specific portion of the national revenue from the sale of public lands, leaving the work still in the hands of the government, as was proposed by the Memphis Convention; and (4) the road might be built by the individual states, aided by grants of land from the government, as was proposed in the South Atlantic and Pacific railroad bill.

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[62] A route very similar to this had long been advocated by General Houston of Texas. See above, p. 12.

[63] This was the plan of P. P. F. DeGrand of Boston, who proposed that a company be chartered by Congress with a capital of $100,000,000, and that this company, after having paid in $2,000,000, should have the right to borrow United States 6 per cent stock to the amount of $98,000,000.

CHAPTER III

PRELIMINARIES TO THE EXPLORATIONS OF 1853–1855

Senator Gwin and the Pacific Railroad.—In the history of the Pacific railroad enterprise the short session of the Thirty-second Congress is memorable. In the Senate almost the entire session was monopolized by a discussion of the railroad project and related subjects. By this time the importance and necessity of the project had risen to such magnitude as to preclude reference to committees, as had previously been the case; it was freely and bitterly discussed by the entire Senate in Committee of the Whole; plans were presented, amended, and defeated; and but one necessary step was taken—the ordering of surveys to determine the most practicable route.

The men who dominated this session, and who placed the necessity of a Pacific railroad above sectional feelings and party creeds, were Senators Gwin, of California, Rusk, of Texas, Borland, of Arkansas, and Bell, of Tennessee. Gwin, realizing perhaps better than any other member the imperative need of rapid communication with the extreme western regions, had long striven to bring about official action. In December, 1850, while presenting a memorial of the California Legislature, he had urged haste, advising, however, that surveys be made first in order not to commit the government to any impracticable scheme.[1] He was an advocate of a national road, and in August, 1852, when a bill granting land to the several states for the benefit of indigent persons was up for discussion, he proposed an amendment, providing for the construction of two railroads, one from the region below Memphis, and the other from the neighborhood of St. Louis,

[1] *Cong. Globe*, 31 Cong., 2 sess. (1850–51), XXIII, 132.

with a branch to Oregon. His reasons for attaching the amendment to such a bill were: (1) that both were so intimately connected with the grant of public lands; and (2) that a railroad was an immediate necessity for "upon the completion of one or more railroads connecting our Atlantic and Pacific possessions, depends the existence of this Union. The present connection between the Atlantic States and our Pacific coast is too precarious . . . Do you expect we can remain one nation when our social and commercial intercourse is held by so precarious a tenure? . . . this measure . . . is required to make us feel on the Pacific coast that we have all of the advantages of our sister States, and are on a perfect equality with them."[2]

Senator Borland, of Arkansas, likewise, had long realized the commercial and political importance to the frontier states bordering on the Mississippi of railroad communication with the Pacific. His most active work in this respect had been done in committees, where he constantly urged surveys and explorations as preliminaries to the immediate construction of the road.[3]

Senator Rusk, though younger in point of service, was none the less untiring in his efforts to bring action on the Pacific railroad project. He assumed the leadership during the greater part of the session of 1852–53, and perfected a feasible plan for the construction of a road; but he was opposed and defeated by the creeds of his own party which he, himself, had laid aside. He fought to retain his bill when other matters more vital to his state, *e.g.*, the Texas Debt question, were threatening to supersede it. Although the ordering of surveys was but a small part of what Gwin and Rusk wished to see accomplished in this session, it was due almost entirely to their perseverance that this first positive official act towards the building of the road was taken.

[2] *Ibid.*, 32 Cong., 1 sess. (1851–52), XXIV, pt. 3, p. 2467.

[3] *Cong. Globe*, 30 Cong., 1 sess. (1847–48), XVIII, 873; *ibid.*, 30 Cong., 2 sess. (1848–49), XX, 381; *ibid.*, 31 Cong., 1 sess. (1849–50), XXI, pt. 1, p. 371.

Hardly had the short session convened when Senator Gwin introduced a bill which authorized "the construction of a railroad and branches; for establishing a certain postal communication between the shores of the Pacific and Atlantic, within the United States; for the protection and facilities of travel and commerce, and for the necessary defenses of the country."[4] In recognition of the vast importance of the subject, the bill was made the special order for a certain day, to be considered by the Senate in Committee of the Whole.

The plan proposed by Gwin required that the main trunk of a great Pacific railroad system should commence at San Francisco, and, following the southern arm of the bay through Santa Clara and San José, turn northeast, through Stockton, to a point south of the source of the Stanislaus River; thence along the foothills of the Sierra Nevada, through Walker's Pass, to Zuñi along the thirty-fifth parallel. The Sierra Madre could be crossed by well-known passes (North or South Zuñi), to Albuquerque, whence, following the Del Norte, a point thirty-five miles south of Santa Fé could be reached. Thence, turning southeastwardly to the sources of the Red, the north bank of that river could be followed to Fulton in Arkansas. A branch to St. Louis would begin south of Santa Fé, and, turning northeastwardly, reach and follow the well worn trail from Santa Fé to Independence and St. Louis. Gwin advocated that from this branch road a second branch be constructed from the crossing of the Arkansas River to Council Bluffs and Dubuque. From Fulton a branch would run northeastwardly through Little Rock to Memphis, and another branch southeastwardly to New Orleans. A Texas branch would begin near the sources of the Red, and follow southeastwardly along the bank of the Colorado to Matagorda or Austin. A branch to Oregon would begin south of the source of the Stanislaus River in California and follow north along the

[4] *Ibid.*, 32 Cong., 2 sess. (1852–53), XXVI, 125.

foothills east of the Sacramento River to its source; thence along the foothills on the west side of the Cascade Range, crossing the Columbia River near Oregon City to Fort Nisqually on Puget Sound.[5]

The total estimated length of the main trunk and branches, as proposed by Senator Gwin, was 5,115 miles. He asserted that every mile of it had been explored by army officers and engineers and had been reported practicable. Letters were presented by him from R. H. Kern, who had accompanied Fremont on his last expedition, and had later been with Captain Sitgreaves; from Captain Sitgreaves, himself; from Major Backus, Major Cunningham, and Lieutenant Parke of the army; from Mr. Messervy, a delegate to Congress from New Mexico, and from Mr. Jones, a government contractor of that territory with extensive experience; and from Captain Ord, who had been dispatched by General Riley from Monterey in 1849 to report upon the practicability of that very route for a railroad. The substance of these communications was to show that the thirty-fifth parallel route was entirely practicable, and that sufficient information already existed to enable Congress to locate the road on that line.[6]

Gwin advocated that construction be effected by a grant of the public lands by Congress to the states of Louisiana, Missouri, Arkansas, Iowa, and California, and that 152,000 square miles be set aside for this purpose in the territories. Texas had a standing grant of a strip of land seven miles in width, within her boundaries, for the first Pacific railroad project.[7] Gwin believed that by defraying the cost of construction in this way all interference with state sovereignty would be avoided since it was to the interest of the state to coöperate; and the constitutional power of the

[5] For more complete details of the route proposed by Gwin see *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 280.

[6] *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 320–321, 422–423.

[7] See above, p. 23.

central government over the territory was generally recognized even by the most ardent advocates of states rights.

The importance, indeed the imperative necessity, of at once connecting the Far West with the Atlantic states was, each day, urged with more and more vehemence. A few characteristic statements will show the significance attached to the subject. Senator Borland deemed it of "much more importance than any or all measures now before the Congress of the United States,"[8] and did not "consider any other of one tithe the importance of this."[9] Stephen A. Douglas did not "think that there is any question that can come before us more worthy to occupy attention than that of a railroad to the Pacific."[10] And Senator Gwin appealed to each member "to lay his sectarian principles aside and come up to this great work as an American, with singleness of purpose, scorning all sectionality, and looking at the common good of our common country, with a fixed determination that it shall be completed, and that, too, as rapidly as unrestricted means and human energies can accomplish it."[11]

But that which Gwin asked was the one thing that could never be eliminated from any discussion upon such a project. Many members did rise above all sectional prejudices; Chase,[12] Seward, Cass,[13] Dodge, of Iowa,[14] and a few others, considered the project in its purely national aspect. But to the majority in the

[8] *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 352.

[9] *Ibid.*, 356.

[10] *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 507.

[11] *Ibid.*, 284.

[12] "The shortest route, the cheapest route, and the route which will accommodate the greatest number of people . . . shall have my support, my earnest and persevering support" (*ibid.*, 339), and again, "By no ingenuity—by no process of torture even, can it be converted into a section question" (*ibid.*, 662).

[13] "I do not care where you touch the Mississippi, because, when you get there, wherever you are, you will be in the center of the country" (*ibid.*, 285).

[14] "You may exclude my state entirely, and I will vote for the bill . . . I shall vote for the best line" (*ibid.*, 317).

Senate the test question on the Gwin bill was whether or not there should be any route or terminus mentioned in it. Those who most strongly opposed the bill for sectional and political reasons, hedged behind the plea that there was not sufficient knowledge of the country available to commit the government to adopting any particular route.[15] They insisted that thorough surveys should first be made and the results presented to Congress before any route was selected. But when, later in the session, an amendment was before the body to cause surveys to be made, they opposed it as bitterly as they had the Gwin bill. Throughout the session this opposition to the railroad project came from the representatives of the Atlantic states. Senators Butler and De Saussure, of South Carolina, and Mason and Hunter, of Virginia openly asserted that they were hostile to it because the building of a railroad to the Pacific would mean the loss to the Atlantic seaports of the bulk of their commerce with the interior states.

Senator Rusk's Proposal.—It was evident at length that the mere mention of route and termini was a bar to further progress on Senator Gwin's bill, while the even more important question of means had at that time been scarcely touched upon. While this bill was being debated, a select committee, which had been appointed to consider the whole question of interocean communication, was perfecting a bill which it was thought would meet the approval of the Senate. Senator Rusk, of Texas, was chairman of the committee, and the one who drafted the bill, and when it seemed certain to him that no action could be secured on the Gwin bill, he asked that his be substituted for the latter on the calendar.[16] Profiting from the opposition which had been accorded the preceding measure Rusk drafted a bill the very

[15] See speech of Smith, of Connecticut, in *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 354.

[16] *Ibid.*, 431, 458.

first section of which provided for preliminary surveys, though no definite mention was made of routes or termini. From the results of the surveys the President was authorized to select the most feasible route.

Despite this clause the rabid opponents of the project at once began to clamor for a bill authorizing surveys alone. Senator Brodhead, of Pennsylvania, introduced an amendment appropriating $150,000 for reconnoissances, and this with the avowed intention of defeating the bill and the project for the session.[17] But the opposition could make no headway because of the saving clause in the bill, and, as a result, attention was turned to the advocated means of construction as a possible means of defeat.

For defraying the cost of construction Rusk proposed that alternate sections of land for six miles on either side of the road through the states and twelve miles on either side through the territories be set aside, and that an appropriation be made of $20,000,000 in bonds of the government, payable in fifty years and bearing five per cent interest.[18] The out-and-out opponents of the railroad project now asserted that Rusk's was a very ingeniously contrived bill, showing matured reflection for the purpose of introducing a general system of internal improvements, and thus violating fundamental democratic principles. In the giving of power to the President to select the route they saw another violation of those sacred principles;[19] they asserted that it was unconstitutional since it would give the legislative power to the President at the expense of the legislative body. Rusk, however, pointed out that Congress, by reason of the conflicting interests represented, would never be able to decide where and

[17] *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 675.

[18] For further details of the bill see *ibid.*, 469–470.

[19] Speech of Senator Mason, in *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 678; speech of Senator Hunter, *ibid.*, 702.

when the railroad should commence. This must be left to the President as an administrative function.[20]

Another objectionable feature of the bill, and the one upon which it was destined to fall, was that a corporation was created within a state for the purpose of construction, and thus the sovereignity of the state would be interfered with. This section of the bill caused the deflection of many earnest supporters of the project—Weller, of California,[21] Phelps, of Vermont,[22] Cass, of Michigan.[23] Many others, though strongly in favor of the construction of a railroad, would not have it at the sacrifice of this cherished party principle, and, in seeking to amend the bill to accord with their principles, they unconsciously assisted in defeating it entirely. This dissension in the ranks of the majority, the time-honored method of division by which the minority can command, was all that was needed by those representatives of the Atlantic states to accomplish their purposes. Senator Underwood, of Kentucky, in a virulent speech, recognized and deplored this hostility: "One of the salt-water constructions of the Constitution is, that the interior States of the Union . . . are to be entirely dependent upon the sea-board States for a channel of commercial communication through their borders . . . They may refuse to grant facilities in constructing direct lines of railroad or canal between important commercial points in order to force the citizens of other States to travel circuitous routes to promote local interests and the sectional schemes of particular States."[24]

Despite the desperate efforts of Senators Rusk, Gwin, and Borland to retain the bill, it was tabled on February 22,

[20] *Ibid.*, 679, 709.

[21] *Ibid.*, 680.

[22] *Ibid.*, 706.

[23] *Ibid.*, 711. Cass was the recognized leader of democratic principles and his deflection meant the loss to the project of his large following in the party.

[24] *Cong. Globe*, 32 Cong., 2 sess. (1852–53), XXVI, 699.

twenty-three days having been devoted to it almost continuously,[25] with the understanding that it would not be brought up again during the session.

The Surveys Ordered.—The session being almost at an end, the friends of the Pacific railroad made one last effort to commit the government to action. The need of preliminary surveys had been so often urged during the session that it was thought an appropriation to pay expenses would secure the unanimous approval of the Senate. For this purpose, therefore, Gwin suggested that an amendment be made to the army appropriation bill for 1853–54, in the way of additional sections,[26] and Chase, at the direction of the Committee on Roads and Canals, moved the amendment, in order to make the procedure regular. Even this harmless measure aroused the opposition of the members from Virginia and South Carolina; they asserted that the ordering of surveys would necessarily commit the government to the construction of the road and thereby violate their sacred party principles.[27] The amendment, nevertheless, was carried by a vote of thirty-one to sixteen and was sent to the House. There it secured similar opposition from the "sea-board" representatives, led by Bayley, of Virginia, who asked: "What authority have we to make this road? . . . If we have no authority to make the road, what right have we to make a survey preliminary to its construction?"[28] After minor changes, the House concurred in the amendment, the Senate accepted the changes, and the amendment, as a part of the army appropriation bill, took the form of law:

Sec. 10. *And be it further enacted,* That the Secretary of War be and he is hereby authorized, under the direction of the President of the United

[25] The great amount of attention given to the Pacific railroad project, to the exclusion of other important matters, caused Butler on one occasion to exclaim: "Gentlemen must understand that no one measure is to monopolize the whole attention of the Senate" (*ibid.*, 660).

[26] *Cong. Globe,* 32 Cong., 2 sess. (1852–53), XXVI, 760; 798–799.

[27] *Ibid.*, 818.

[28] *Cong. Globe,* 32 Cong., 2 sess. (1852–53), XXVI, 999.

States, to employ such portion of the corps of topographical engineers, and such other persons as he may deem necessary, to make such explorations and surveys as he may deem advisable, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean, and that the sum of one hundred and fifty thousand dollars, or so much thereof as may be necessary, be and the same is hereby appropriated out of any money in the Treasury, not otherwise appropriated, to defray the expense of such explorations and surveys.

Sec. 11. *And be it further enacted,* That the engineers and other persons employed in said explorations and surveys, shall be organized in as many distinct corps as there are routes to be surveyed, and their several reports shall be laid before Congress on or before the first Monday in February, eighteen hundred and fifty-four.[29]

Thus, after eight years of consideration of the project of a railroad to the Pacific, Congress had at length taken a definite step towards its accomplishment. A similar act had been passed in 1849, by which an appropriation of $50,000 was made for the same objects. But as the appropriation had been allowed to pass into the general fund, no results were secured. During that same year, President Taylor, in his annual message to Congress, had urged a careful survey of all the proposed routes as a preliminary measure,[29a] and Secretary of the Interior Ewing had made a similar recommendation.[30] The necessity of preliminary surveys had been urged in every plan presented to Congress with the exception of that of Gwin.[31] The advocates of the railroad project contented themselves with general principles, leaving the exact location of the route to be determined by competent engineers. For the broad region lying to the west of the frontier states along the Mississippi had been traversed in a few directions only, and these without instrumental surveys of a character to indicate the position or direction of the most

[29] *Public Laws passed... at the Second Session of the Thirty-second Congress,* 219.

[29a] *H. Docs.,* 31 Cong., 1 sess., III, pt. 1 (569), no. 5, p. 12.

[30] *H. Docs.,* 31 Cong., 1 sess., III, pt. 1 (569), no. 5, pp. 13–14.

[31] See above, pp. 29–34.

practicable railroad routes.[32] The accounts of travelers, emigrants, traders, and even army engineers varied greatly. So that, as late as 1853, while there was in existence good general knowledge of nearly all the West, there was a dearth of accurate information on the nature, character, and aspect of most of the trans-Mississippi country, and especially in reference to the facilities presented by it for railroad communication. Prior to 1853, there had been no official exploration with that purpose in view.[33]

The Expeditions of 1853–1855.—Secretary of War Jefferson Davis, in organizing the surveys of 1853 "to ascertain the most practicable and economical route for a railroad from the Mississippi river to the Pacific ocean," was guided, for the most part, by the plans which had previously been proposed. Each plan had matured only after long consideration of routes by its advocate, and a thorough examination of the existing knowledge upon

[32] Knowledge of the mountain passes, an essential element in the location of routes, was extremely vague. There were commonly believed to be only six available passes through the Rocky Mountains: South, Stansbury's Coochatopa, North Zuñi, South Zuñi, and Cooke's. Through the Sierra Nevada there were two supposedly practicable passes, Walker's and Warner's, the former 4,000 feet in height, and the latter 3,000 feet. Very little was known regarding the approaches of any pass. Walker's Pass, for instance, was said to present gentle declivities on either side and was much in favor among the advocates of a railroad. But upon minute examination by Lieutenant Williamson, in 1853, it was found to be entirely impracticable.

[33] Thwaites (*Rocky Mountain Exploration*, 239) asserts that Fremont's third expedition (1845–47) was for the purpose of finding the shortest and best route for a railroad to San Francisco Bay. If so, it was under the private instructions of Senator Benton; but the official objects of the expedition were not those attributed by Thwaites. His fourth expedition made in the winter of 1848 and 1849 and ending in disaster in the San Juan Mountains of Colorado was primarily for the purpose of exploring a route for a central road. He received, however, no government support for this expedition. In August, 1853, after the government surveys had been ordered, Fremont, with funds of his own, and Senator Benton's, planned his fifth expedition, to complete the objects of the former. According to Mrs. Fremont, it had been intended that her husband should lead one of the government surveys of 1853, but as Congress had inserted no name in the bill, the Secretary of War had appointed Gunnison to explore the central route (Fremont, *Memoirs*, XV). The results of this Fremont expedition were published in part in 1854 by the government as a contribution to existing knowledge on the subject of railroad construction. *H. Misc. Docs.*, 33 Cong., 2 sess., I (807), no. 8.

each. In this way, the entire bulk of available information had been brought to bear upon four general transcontinental lines: (1) the northern or Whitney route, between the forty-seventh and forty-ninth parallels; (2) the central route proposed by Senator Benton, between the thirty-eighth and thirty-ninth parallels—Fremont's favorite route; (3) the thirty-fifth parallel route, proposed by Senator Gwin, and (4) the thirty-second parallel, or Gila route, suggested in many proposals, and due to receive the most favorable attention of the War Department.

The first party organized under the act of Congress was the one to explore the northern line, the line that had claimed the earliest attention, both from the explorations of Lewis and Clark and the continued advocacy of it by Asa Whitney. This party was placed in charge of Governor Stevens, of Washington Territory, who was directed to operate from St. Paul, or some suitable point on the upper Mississippi, towards the great bend of the Missouri River, and thence on the table-land between the tributaries of the Missouri and those of the Saskatchewan, to some pass in the Rocky Mountains. A second party, commanded by Captain McClellan, was, according to the directions of Governor Stevens, to proceed to Puget Sound, and then to explore the passes of the Cascade Range, meeting the eastern party between that range and the Rocky Mountains.[34]

The survey of the next route to the south was entrusted to Captain Gunnison, of the topographical engineers. He was instructed to explore the route near the thirty-eighth parallel, by way of the Huerfano River and Coochetopa, or some other suitable pass, into the mountainous region of the Grand and Green rivers, then westwardly to the *vegas* of Santa Clara and Nicollet's River of the Great Basin, and thence northward to the vicinity of Lake Utah. Since it was believed that no railway pass could

[34] For full instructions see *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, pp. 55–57.

be found north of the Kern River into either the Sacramento or San Joaquin valleys, it was not thought proper to expend any of the appropriation in a further search; and, it having been learned that the Mormons of Great Salt Lake were making a survey for a railroad from their settlements to Walker's Pass, Gunnison was directed to procure a report of that survey, thus connecting his line with the survey ordered made near the thirty-fifth parallel.[35] Postponing for future operations the exploration of a route from the Salt Lake across the Sierra Nevada to the valley of the Sacramento, Gunnison was directed to return from the Great Basin through the Timpanago cañon or other passes and across the Weber and Bear rivers, by the Coal Basin, to a suitable place of disbandment.[36]

Explorations near the thirty-fifth parallel were placed in charge of Lieutenant Whipple. He was directed to ascend the valley of the Canadian River, pass around the mountains east of the Rio del Norte, and enter the valley of that river at some point near Albuquerque. From there he was to extend his explorations through the Sierra Madre and the mountains west of the Zuñi and Moqui regions to the Colorado of the West, thence, proceeding in the direction of Walker's Pass, to continue his survey by the most direct and practicable line to the Pacific Ocean.[37]

For the thirty-second parallel route no attempt was to be made at a comprehensive survey under a single leader. Detailed information upon a large portion of the route had been supplied by the explorations of Lieutenant-Colonel Emory in 1846–47 and by those of the Boundary Survey Commission. This route passed from Preston on the Red River around the extremity of the Guadalupe Mountains of Texas, and crossed the Rio Grande

[35] *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, pp. 20; 57–56.

[36] For full instructions see *ibid.*, 57–58.

[37] *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, pp. 58–60.

near Doña Ana. From there it followed the table-lands west to the San Pedro River and along the Gila to its mouth. A portion of this route was in Mexican territory,[38] but the Mexican government granted authority to the United States to make all necessary examinations. Captain J. G. Pope was instructed to run the line from Doña Ana on the Rio Grande to Preston on the Red River.[39] At the same time Lieutenant J. G. Parke was to carry the line from the Pima villages on the Gila to the Rio Grande.[40] West of the Pima villages to the Colorado no more complete information was desired than that furnished by the Emory expedition of 1846–47.

Several partial routes on the Pacific slope, to connect with those from the east, were directed to be explored by Lieutenant Williamson. His instructions read: "The party will rendezvous at Benecia, California . . . and will proceed to examine the passes of the Sierra Nevada leading from the San Joaquin and Tulare valleys, and subsequently explore the country southeast of the Tulare lakes, to ascertain the most direct practicable railroad route between Walker's pass, or such other pass as may be found preferable, and the mouth of the Gila." Thence the survey would be continued to San Diego.[41] To complete the connection from the west, Williamson was ordered, in 1855, to run the line up the Sacramento Valley and join at the Columbia with the northern surveys completed by Governor Stevens. In the same year Lieutenant Parke surveyed a coast route from San José to Los Angeles, and thence continued the line as far as the Gila.

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[38] The Gadsden Purchase, giving to the United States the territory south of the Gila, and fixing the present boundary, was not completed until December 30, 1853.

[39] *S. Ex. Docs.*; 33 Cong., 1 sess., II (691), no. 1, pp. 64–65.

[40] *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, pp. 61–62.

[41] *Ibid.*, 60–61.

It was feared by engineers thoroughly acquainted with the western country that the small amount of time and money allotted in the original appropriation would preclude any adequate examination of the country and especially of the mountain passes.[42] But additional appropriations were made and the time extended on all the surveys, so that more than mere reconnoisances were effected. The results of these expeditions, published in thirteen large quarto volumes, with numerous illustrations and maps, contain a vast mine of new information of great value for the study of the history, ethnology, zoology, palaeontology, botany, and geology of the West.

[42] Cf. opinion of Lieutenant-Colonel S. H. Long, *H. Ex. Docs.*, 33 Cong., 1 sess., I, pt. 3 (712), no. 1, doc. C.

CHAPTER IV

STEVENS'S EXPLORATIONS BETWEEN THE FORTY-SEVENTH AND FORTY-NINTH PARALLELS[1]

Organization of the Expedition.—Under the orders of Jefferson Davis, secretary of war, five well organized exploring parties took the field in the spring of 1853. The first and most elaborately equipped party to set out was that led by Isaac I. Stevens, recently appointed first governor of Washington Territory, to conduct a line of survey to the Pacific between the parallels of forty-seven and forty-nine degrees, north latitude. Stevens was by experience, as well as by nature, well equipped for the important tasks before him. A graduate of West Point, he had later been in charge of fortifications on the New England coast; during the Mexican War he had served in numerous campaigns under General Scott; and, at the conclusion of the war, he entered the Coast Survey as assistant to Professor Bache. There

[1] The narrative of Stevens's explorations and the accompanying documents are contained in *S. Ex. Docs.*, 33 Cong., 2 sess., XIII, pt. 1 (758), no. 78, supplemented by *S. Ex. Docs.*, 35 Cong., 2 sess., XVIII (992), no. 46. These two large volumes of reports include elaborate illustrations and appendices on botany, and zoology, in addition to the geographic details required for railroad construction.

The quarto set of explorations and surveys for the Pacific Railroads comprise parts 1–11 of *S. Ex. Docs.*, 33 Cong., 2 sess., XIII (758–768), no. 78, and *ibid.*, 35 Cong., 2 sess., XVIII (992), no. 46. *H. Ex. Docs.*, 33 Cong., 2 sess., XI, pts. 1–11 (791–801), no. 91, and *ibid.*, 36 Cong., 1 sess., XI, pts. 1–2 (1054–1055), no. 56, contain the same material as is found in the Senate Documents. This set is commonly referred to as "*Pacific Railroad Reports*, vols. 1–12," which designation I shall use throughout for convenience in citation. Page references herein are to the Senate Documents.

Preliminary reports, instructions to officers, etc., are also to be found in *H. Ex. Docs.*, 33 Cong., 1 sess., XVIII, pt. 1 (736), no. 129, and in *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1.

he gained further training which was to make his name prominent in the survey of the Northern Pacific Railway, the historic road of the continent.

The general project of this survey, according to instructions issued on April 8, 1853,[2] was to operate from St. Paul or some suitable point on the upper Mississippi River, towards the great bend of the Missouri, and thence, on the table-land between the tributaries of the Missouri and those of the Saskatchewan, to some pass in the Rocky Mountains. A depot was to be established at Fort Union, at the mouth of the Yellowstone River, by an advance party going by boat with most of the supplies from St. Louis. This division was to await at Fort Union the coming of the main party overland, and in the meantime was to examine the country adjoining the fort.[3]

While the main party should be working west from St. Paul, a second large expedition was to proceed by boat to Puget Sound and explore east through the Cascade Mountains. A junction with the eastern party was to be effected wherever Governor Stevens might direct.

The detailed instructions required that Stevens "examine carefully the passes of the several mountain ranges, the geography and meteorology of the whole intermediate region, the character, as avenues of trade and transportation, of the Missouri and Columbia rivers, the rains and snows of the route, especially in the mountain passes, and, in short, to collect every species of information bearing upon the question of railroad practicability. It was necessary, moreover, to give great attention to the Indian tribes, as their friendship was important and bore directly upon the question both of the Pacific railroad and the safety of my party."[4]

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[2] *S. Ex. Docs*, 33 Cong., 1 sess., II (691), no. 1, p. 55.

[3] *Pacific Railroad Eports*, XII, pt. 1, pp. 22–23.

[4] *Pacific Railroad Reports*, XII, pt. 1, p. 21.

Captain George B. McClellan was selected as the chief assistant of Governor Stevens for this survey, and was recalled from duty in Texas for the purpose of leading the western portion of the expedition. Other assistants detailed on the survey were Captain J. W. T. Gardiner; Lieutenant A. J. Donelson, with ten sappers and miners; Lieutenant Beckman du Barry; Lieutenant John Mullan; Lieutenant Cuvier Grover; I. F. Osgood, disbursing agent; J. W. Stanley, artist; George Buckley, surgeon and naturalist; F. W. Lander and J. W. Tinkham, assistant engineers; John Lambert, topographer; George W. Stevens, Wm. M. Graham, and A. Remenyi, in charge of astronomical observations; J. W. Moffett, meteorologist; John Evans, geologist; Thomas Adams, Max Strobel, Elwood Evans, and A. Jekelfaluzy, aids; and T. S. Everett, quartermaster and commissary clerk.[5] The parties were to receive their equipment, ammunition, subsistence, etc., from the various divisions of the War Department which had them in charge; and for the entire operation of the northern survey, the sum of $40,000 was set aside to be utilized by Stevens.

Because the route was comparatively new and unexplored, the expedition was organized into two main divisions, the eastern in charge of Governor Stevens, and the western under the immediate direction of Captain McClellan. To assist McClellan, Lieutenant Duncan and Dr. J. G. Cooper, surgeon and naturalist, were detailed. Since McClellan was necessarily detained in Texas, Duncan, on May 5, set out for the mouth of the Columbia to make preparations for the survey. McClellan, however, was able to depart on the twentieth, and, before reaching the Columbia, had

[5] See *Pacific Railroad Reports*, XII, pt. 1, pp. 22–24, for the entire composition of the party as first organized. Many members of Stevens's party later became famous as army officers or scientific men. Captain McClellan, who commanded the western division, became, during the Civil War, the commander-in-chief of the Army of the Potomac, and later the Democratic candidate for President. Lieutenant Saxton became a brigadier-general as did Lander, the chief engineer. Lieutenant Grover was afterward a major-general of volunteers and a colonel in the regular army.

secured as additional assistants, J. Winter, Lieutenant Mowry, Mr. George Gibbs, ethnologist, geologist, and interpreter, and Lieutenant Hodges, who was made acting quartermaster and commissary. Lieutenant Saxton, the quartermaster and commissary of the western division, had been sent in advance to the valley of the Columbia with instructions to organize and transport a depot into the Bitter Root Valley; and thence, continuing east, he was to reconnoiter the country until he might unite with the eastern party in the neighborhood of Fort Benton.[6]

The northern division, then, as first organized, consisted of four separate parties. The one under the personal supervision of Governor Stevens was to operate from St. Paul on the Mississippi westward towards the mouth of White Earth River; thence on the prairies lying along the Missouri River to the Rocky Mountains and through the passes of that region. A second, under Captain McClellan, was to set out from Fort Vancouver on the Columbia and operate northeastward through the passes of the Cascade Range, and thence eastward to join Governor Stevens's party. Another party, under Lieutenant A. J. Donelson, was to examine the Missouri River from its mouth to Fort Union at the mouth of the Yellowstone, where it was to unite with that of Stevens. And a fourth party under Lieutenant Saxton was to conduct the reconnaissance from Fort Walla Walla to the Bitter Root Valley, where a supply depot was to be established.

From St. Paul to Fort Union, at the Mouth of the Yellowstone.—The Stevens party, the most elaborately equipped of all the expeditions to survey for a Pacific railway, was organized in New York. Having sent the two engineers, Lander and Tinkham, in advance to St. Paul to examine the river crossings in that vicinity, Stevens, himself, set out by way of St. Louis.

[6] Report of Lieutenant R. Saxton, February, 1854, in *Pacific Railroad Reports*, I, 251.

There he procured several guides, among whom was Alexander Culbertson, an employee of the American Fur Company and agent to the Blackfeet Indians; a quantity of provisions; and a number of horses and mules. On May 27 he arrived at St. Paul.[7] His advance party under Captain Gardiner had located on Lake Amelia, about nine miles from the city of St. Paul and three miles northwest of Fort Snelling. The camp established there was named Camp Pierce in honor of the President. Some little time was spent there in breaking the mules, often with unfortunate results to members of the party.

Receiving at Camp Pierce a report from Mr. Lander, who had previously examined both sides of the river from St. Paul as far north as Little Falls,[8] Stevens decided to cross the Mississippi at Sauk Rapids. He determined also to start off advance parties and small trains at once in order to procure timely information concerning the features of the country and any difficulties that would impede progress.

Lander and Tinkham were accordingly sent out on May 31 to prepare a crossing at Sauk Rapids and to proceed thence in advance to determine a practicable route for the main train.[9] On June 6 the entire party moved from Camp Pierce in three divisions, one section going by boat to Sauk Rapids to take meteorological observations. The point of departure from the Mississippi River was at Cold Springs, on the east side. Grover, however, in charge of the water party, had encamped about five miles below Sauk Rapids.

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[7] St. Paul he describes as "beautifully located upon a high bluff on the east bank of the river, and is rapidly growing in size and importance. It is quite a business place, everything indicating vigor and activity. Among its prominent buildings are the territorial capitol, modelled after the Capitol at Washington, and several very fine churches" (*Pacific Railroad Reports*, XII, pt. 1, p. 25).

[8] Report of F. W. Lander, May 22, 1853, *ibid.*, I, 224–225.

[9] Stevens to Lander; Stevens to Tinkham, May 21, 1853, in *Pacific Rail road Reports*, I, 16–18.

On June 10 the entire party crossed at Sauk Rapids, establishing and naming Camp Davis on the west side. Stevens at once initiated his policy of sending out reconnoitering parties in order to examine as great an area of country as possible. The first of these to depart was led by Lieutenant Grover under instructions to reconnoiter near White Bear Lake and determine at what point the main party should leave the Red River trail. He was then to go north to Lake Traverse to Dead Colt Hillock, and thence on to the Yellowstone.[10]

On June 14 the whole train moved forward from Camp Davis, on the Red River trail, which followed the general direction of Sauk River, and thence to Pike Lake. Several lakes and streams along the route were named after members of the party. Pike Lake was considered the real starting point of the expedition and the camp there was named Camp Marcy in honor of the Secretary of State. At this point Grover rejoined the party from his first reconnaissance, and was at once sent out, on June 25, with twenty-one men to examine Lake Traverse lying to the west. Having accomplished this, his instructions ordered him to proceed on the Dead Colt Hillock line to the mouth of the Yellowstone.[11] The main party, advancing from Camp Marcy in order to examine the railroad line to Fort Union, crossed the Chippewa River[12] on the Red River trail. The route then lay north of west toward the Bois de Sioux River[13] and passed by Elbow and Poplar lakes.

After crossing Wild Rice River, a tributary of the Red, west of the Bois de Sioux, the route lay over a good level country to the Shayenne River, also a tributary of the Red. Having

[10] *Ibid.*, XII, pt. 1, pp. 30–31.

[11] Stevens to Grover, June 25, 1853, in *Pacific Railroad Reports*, I, 222–223.

[12] This is the present Medicine Fork of the Minnesota River.

[13] This is the present Sioux Wood River, flowing into Lake Traverse and marking a portion of the boundary between Dakota and Minnesota.

established Camp McClellan on the west bank of this river, reconnaissances were made up the river to Dead Colt Hillock. One small party, led by Lander, was instructed to examine the country west and south of its great bend, and to cover, in this way, the entire territory between the route of Stevens and that of Grover to the south.

The main party continued northwest, crossing Maple and Rush rivers, also tributaries of the Red, and on July 7 once more struck the Shayenne. Stevens followed it down for several miles, at length effecting a crossing at a point called by him Camp Guthrie. The party was now approaching the buffalo country and signs of these animals became more apparent after crossing the Shayenne. On the tenth camp was made on Lake Jessie—this being the last point at which the Stevens survey would connect with that of Nicollet, who had traversed the region between Lake Jessie and the Mississippi some sixteen years before.[14]

On July 12 Lander rejoined the party at Beaver Lodge Creek. Meanwhile his survey was being connected up to Bald Hillock Creek by a reconnoitering party under Tinkham. Lander, after leaving the main party at Camp McClellan at the first Shayenne crossing on July 4, had followed the right bank of the Shayenne River, deflecting far south of the great bend, however, to Dead Colt Hillock, almost to Grover's trail. Then turning north, he had followed closely the west bank of the river to Bald Hillock Creek.[15]

While delaying near Lake Jessie, short reconnaissances were made in the vicinity. On one such reconnaissance was discovered what was thought to be a Sioux village of about one thousand

[14] *Pacific Railroad Reports*, XII, pt. 1, pp. 46–47. Nicollet's surveys between the years 1836–40 were the first to use the barometer in order to determine latitude, and thus a great stride was taken in scientific examination. *S. Ex. Docs.*, 27 Cong., 3 sess., IV (416), no. 243.

[15] Report of F. W. Lander, February 15, 1854, *ibid.*, I, 86–87.

lodges. But, after a period of unnecessary alarm, this was found to be a camp of Red River hunters. The homes of these people were at Pembina, on the Red, near the Canadian border, where they devoted themselves to agriculture. Twice each year, however, headed by their governor, they moved south to hunt the buffalo, each hunt lasting for a period of two months.[16]

As Stevens continued along the trail of the Red River hunters, he sent out reconnaissances north of the main Shayenne and south, pursuing a line parallel to the route of the main party. The main party continued, passing the Butte de Morale, and, reaching White Wood Lake, was rejoined by the reconnoitering parties under Lander and Tinkham. On July 20, Lander was sent on a second reconnaissance to examine the Maison du Chien and the Coteau du Missouri, which lay to the south. In this way Stevens hoped to connect further his survey with the line being run by Grover. On July 21, the main party struck the trail of Grover near Mouse River, and followed along the south bank of the river between it and the Coteau du Missouri. The route now coincided almost exactly with that of Grover, taken a few days previous. Reconnaissances at the same time were being made of the Mouse River and the River of the Lakes, and Lander was sent on a more extended and detailed examination of the White Earth River, the Coteau du Missouri, and

[16] This particular party consisted of 824 carts, about 1200 animals and 1300 persons, men, women and children. On encampment they made a circular or square yard of the carts, placed side by side with the hubs adjoining, presenting a barrier impassable either to man or beast. The meat procured on their trips was exchanged at Fort Snelling through traders of the American Fur Company for goods, sugar, coffee, etc. The hunters also had among them currency issued by the Hudson's Bay Company, trade in robes being carried on with the latter company as well as with the American Fur Company (*Pacific Railroad Reports*, XII, pt. 1, pp. 51–52).

Stevens describes the Red River settlements at Pembina as "made up of a population of half-breeds, traders of the Hudson Bay and Fur Companies, discharged employés of these companies, and Indians, representatives of every nation of Europe, Scotch, Irish, English, Canadians, and speaking a jargon made up of these dialects, intermingled with Chippewa and Sioux, patois French being the prevailing tongue." (*Ibid.*, XII, pt. 1, p. 53.)

the Yellowstone.[17] The main train, after passing through the Assiniboine country for several days, reached Fort Union on August 1, fifty-five days from St. Paul, and a measured distance of seven hundred and fifteen and one-half miles.

At Fort Union Stevens found Grover, who had arrived several days before. According to the report of the latter,[18] he had left the main party at Pike Lake on June 25 in order to search out a more southerly route to the fort. After crossing the Chippewa River, he travelled over a level prairie almost due west to Lake Traverse. Then, skirting the eastern edge of the lake, he followed down the Bois de Sioux, the outlet of the lake running north into the Red River; and, after twenty-two miles, he crossed it three miles above (i.e., south of) the point where the main party later crossed. His course then lay a little north of west in a straight line, crossing Wild Rice River. On July 6, after travelling about eighty miles, he reached the Rivière à Jacques, or James River. The James is a tributary of the Missouri, but is here separated from it by the Grand Coteau. From there, pursuing a more northerly direction and skirting the Grand Coteau, in one hundred and eighty miles, Grover reached the Mouse River. From that point to Fort Union his course was that followed by Stevens.

On reaching Fort Union, Stevens also discovered that Donelson had already arrived. He had come from St. Louis by boat with a party of eight, and had observed the course of the river, and the country on either side as to capacity for settlement. Forty-two days were occupied on this trip. Having arrived at Fort Union, Donelson had begun at once to explore the neighboring country. He examined to the north of the fort between the

[17] No detailed written instructions are to be found for a great number of minor reconnaissances; Stevens, however, gives due importance to them in his journal.

[18] See *Pacific Railroad Reports*, I, 486–488, for Grover's final report of his examinations from Pike Lake to Fort Union.

Big Muddy and White Earth rivers, ascending the valley of the former for about forty-two miles, and then crossing to White Earth River. His course then lay down the latter for thirty miles, and thence west, parallel with the Missouri, to the fort.[19] While delaying at Fort Union, the party on August 5 was joined by Lander, who had made a reconnaissance of the River of the Lakes, the Coteau du Missouri, and the upper waters of the Mouse.

Fort Union was found by Stevens to be a well built stronghold, located on the east bank of the Missouri River near the mouth of the Yellowstone. It had been built in 1830 by the American Fur Company, and, since that time, had been the chief supply depot for that company and a trading point for the Assiniboines,[20] Gros Ventres, Crows, and other migratory bands of Indians.

From Fort Union to Fort Benton.—Having made all necessary preparations at Fort Union, the main party, with Alexander Culbertson as guide, set out on August 9 for the Big Muddy River. Stevens, however, delayed a day to treat with the Blackfeet and arrange for a great council of Indians to be held at Fort Benton in 1854, at which the Blackfeet should make peace with the hunting tribes west of the Rocky Mountains.

On reaching the Big Muddy, Stevens determined to pursue the Milk River route, traveled by the American Fur Company's wagons from Fort Union, and in the meantime to develop the

[19] Report of Lieutenant A. J. Donelson, March 8, 1854, in *Pacific Railroad Reports*, I, 231–247.

[20] The Assiniboines were described by Stevens as having "a look of poverty, judging from the meagreness of clothing and the length of time it appeared to have been worn, while all appeared very filthy and miserable" (*Pacific Railroad Reports*, XII, pt. 1, 59). The Indians feared that the building of the railroad would injure them by driving back the buffalo: "My father [Stevens], we hear that a great road is to be made through our country. We do not know what this is for; we do not understand it; but I think it will drive away the buffalo. We like to see our white brothers; we like to give them the hand of friendship, but we know that as they come our game goes back" (*ibid.*, 60).

country by detached reconnaissances.[21] Leaving the Big Muddy on August 14, the route lay along the level bottom of the Missouri, across Poplar and several other small rivers, to the mouth of the Milk. The first camp on that river was named Camp Atcheson, in honor of the acting vice-president. The side work of this portion of the survey was done by Tinkham, Lander, and Grover. From Camp Atcheson, Stevens issued written orders making Donelson executive officer of the expedition for future operations.[22]

Since they had now reached the Indian country, the attitude of whose inhabitants was uncertain, the party was split up. Lander and Grover received instructions to push rapidly ahead with two small parties as advance guard. On the twenty-fifth, the main train approached a camp of the Gros Ventres[23] containing some three hundred lodges and two thousand Indians. With these Indians Stevens talked regarding the making of peace with the Blackfeet. The camp of the party among the Gros Ventres was given the name of Camp Armstrong.

On the twenty-ninth the party was in sight of the Bears Paw Mountains, stretching from the Milk River to the Missouri. Stevens sent a reconnoitering expedition under Lander and Grover to examine them and the surrounding country. Also Tinkham was sent to examine the Three Buttes, farther to the northwest, and the country between the Milk and Marias rivers, with orders to rejoin the main party at Fort Benton.

Setting out from camp on the Milk River on September 1, the main party proceeded up Box Elder Creek. Leaving the headwaters of this creek, the route lay southwest to the Tejon

[21] Stevens to Secretary of War Davis, August 8, 1853, in *Pacific Railroad Reports*, I, 20–21.

[22] *Ibid.*, XII, pt. 1, 75.

[23] The Gros Ventres appeared to be "a simple-minded race, easily influenced, and very kindly disposed towards the whites. They are filthy in the extreme in the habits.... Being improvident, it is always feast or famine, either having abundance or else nothing" (*ibid.*, XII, pt. 1, p. 77).

River and thence to Fort Benton, where the party was received on September 5 with a salute of fifteen guns. Fort Benton was located on the eastern bank of the Missouri, near the Great Bend, and about eighteen miles below the Falls. Up to this point the country had been found to be entirely practicable for a railroad. It was three hundred and seventy-seven and one-half miles by trail above Fort Union. The fort, itself, was smaller than the latter fort, and, at that period, contained usually a dozen families.[24] The Blackfeet Indians who camped near the fort throughout the winter, were the principal traders there.

Activities at Fort Benton.—On September 3 the reconnoitering party composed of Stanley, Lander, and Lieutenant Grover arrived at the fort. After leaving the main party at Milk River they became lost, but succeeded in their examination of the Bears Paw Mountains. On the fifth, Evans also reported, having made a fifteen day journey from Fort Union; his route lay in a direct line across the country between the Missouri and Milk rivers.[25] Stevens now began his arrangements for examining in detail the passes of the Rocky Mountains, for there lay the chief problem of his survey. On September 5 Grover was sent out to open up connection with the parties operating from the west.[26] His instructions ordered him to cross over into the Bitter Root Valley to determine whether Lieutenant Saxton had established the supply depot there. In case he did not find Saxton, his instructions authorized him to continue to the Kootenay post and open up communication with Captain McClellan. Lander was also instructed to go forward with a good outfit and examine Marias Pass, to the north, and to meet the main party in the valley of Clark's Fork, west of the divide.

[24] Fort Benton was one of a series of posts established by the Western Department of the American Fur Company. It was originally called Fort Piegan from the Blackfoot tribe of that name, then Fort Mackenzie, and finally Fort Benton.

[25] *Pacific Railroad Reports*, I, 78.

[26] Stevens to Grover, September 5, 1853, *ibid.*, I, 34.

Donelson, after having sent Tinkham to reconnoiter the Three Buttes, arrived at Fort Benton with the main train on September 6. There he promptly received written instructions from Governor Stevens for the future prosecution of the survey.[27] At the same time Stevens reported to the War Department that a deficiency would be incurred were everything completed according to his original instructions.[28] He decided, nevertheless, to continue, since the determination of the depth of the snow in the mountains was by far the most important object of his expedition; for this purpose winter posts should be established at Fort Benton and in the Bitter Root Valley. Accordingly he hoped for an additional appropriation (which was granted him) to enable him to complete the survey with the same thoroughness with which he had operated thus far. He also urged the matter of the Blackfeet council upon the Indian Department, saying that it would have a weighty influence on the whole question of emigration along the route, and of any operation which might be taken by the government, or its citizens, either in the way of wagon roads or railroads.[29]

Better to advertise this council among the Indians, Stevens sent Lieutenant Mullan on an expedition south to the Flathead camp on the Muscle (or Mussel) Shell River, conveying a message of peace to them. A second object of this expedition was to explore some good pass, of which several were known to exist, leading from the forks of the Missouri to the Bitter Root Valley.[30]

All reconnoitering parties set out on September 9, and, on the same day, Stevens departed for Cypress Mountain to the

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[27] Stevens to Donelson, September 7, 1853, in *Pacific Railroad Reports*, I, 35–38.

[28] Stevens to Davis, September 8, 1853, *ibid.*, I, 23–24.

[29] *Ibid.*, I, 23.

[30] Stevens to Mullan, September 8, 1853, in *Pacific Railroad Reports*, I, 34–35.

north (in British possessions) to hold a meeting with the Blackfeet residing there. He had barely reached the Marias River, however, when he was overtaken by an express from Donelson, at the fort, saying that Grover had met the advance party from the west on the dividing ridge and was returning with Saxton to Fort Benton. Stevens accordingly put Mr. Stanley in charge of the expedition to the Piegan (Blackfeet) camp, and returned to the fort.

Saxton's Reconnaissance from Fort Vancouver to Fort Benton.—Saxton immediately made his report to his chief.[31] He stated that he had arrived at Fort Vancouver on June 27, and, after making the necessary preparations, had sent Lieutenant Arnold with an advance party and with stores designed for the depot in the Bitter Root Valley. Saxton overtook Arnold at the Dalles, and the entire advance party, fifty-two in number, consisting of Lieutenants Saxton, McFeely, and Arnold, Messrs. Arnold and Hoyt, and forty-seven enlisted men, set out on the emigrant road parallel to the south bank of the Columbia. On July 27, Fort Walla Walla, one hundred and twenty miles from the Dalles, was reached. Learning there that the usual direct route to the Bitter Root Valley by way of the Kooskooskia River was very difficult, Saxton determined to adopt the more circuitous one by way of Lake Pend d'Oreille to the north.

From Fort Walla Walla, therefore, his route lay up the Walla Walla Valley for twenty-five miles and thence crossing to the Snake River. Near the mouth of the Peluse (or Pelouse) River he was met by a large delegation of the Peluse and Nez Percés warriors who were greatly excited and feared that Saxton's party boded them no good. But Saxton reassured them and secured their aid in making the difficult crossing of the Snake. Being then in good country he made long marches directing his

[31] See *ibid.*, I, 251–269 for complete final report of Saxton made in February, 1854.

course north, and going eighty-five miles reached the Spokane River. The Indian tribes of this region were found to be "a noble specimen of their race, and... as yet too proud to beg."[32] They too were alarmed at Saxton's approach, since they had been told by Spanish traders that the Americans were coming to make war on them.

From the Spokane River, Saxton directed his course to Lake Pend d'Orielle, following up the Coeur d'Alene River and crossing the prairie of that name. From the Pend d'Oreille Indians, whom he describes as "perfectly civil, and seemed to feel proud, rich, and independent,"[33] he learned of a large party (Stevens's), coming from the east to make peace with the Blackfeet. On leaving the north shore of the lake his route lay along the valley of Clark's Fork for seventy-five miles, to the point where it is formed by the junction of the Bitter Root and Flathead rivers. Then, crossing the Cabinet Range, he entered Thompson's Prairie where the Hudson's Bay Company had established a large trading post; and, on August 28, he reached St. Mary's village in the Bitter Root Valley. This village had originally been laid out in 1841 by Jesuit missionaries, led by Father de Smet, who had introduced agriculture and the arts among the Indians. The village had been completed by a Mr. Owen, who had recently abandoned it, however, from fear of the Blackfeet.[34]

Having accomplished this most important portion of the work, Saxton sent back all of his extra men (nineteen) under Lieutenant McFeeley by way of the southern Nez Percés trail

[32] *Pacific Railroad Reports*, I, 256.

[33] *Ibid.*, I, 257.

[34] The Blackfeet had been persistently hostile to the Americans even before Astor and the American Fur Company entered their territory (Coman, *Economic Beginnings of the Far West*, I, 307, 344, 356, 364, etc.). As late as 1853 Saxton was compelled to keep close guard to forestall their thefts and ambuscades (*Pacific Railroad Reports*, I, 259).

across the Bitter Root Mountains near the Kooskooskia River. Saxton left the village on September 2 on his way to Fort Benton, following up the Blackfoot Fork and crossing the dividing ridge between the headwaters of the Columbia and those of the Missouri. The ridge at this point (Cadotte's Pass) was less than a mile across.[35] On September 8, he met Lieutenant Grover and his party on the way to St. Mary's village bringing news of the arrival of Stevens at Fort Benton. Thus one object of the whole expedition was accomplished—a party from the Atlantic and one from the Pacific had met at the foot of the dividing ridge after traversing thousands of miles of little known country.

On September 12, Tinkham also reported at Fort Benton. As noted above (p. 56), he had been sent out by Donelson on September 3 to examine the Three Buttes near the Canadian border. Leaving the main party at Bears Paw Mountain, he traversed the valley of Milk River nearly to the forty-ninth parallel. He then proceeded to and examined the Three Buttes. He found on these buttes[36] many traces of Assiniboine, Crow, and Blackfeet Indians. Pursuing then a southwestwardly course to the Marias River, he crossed it seventy miles above its mouth; thence he proceeded in a southeastwardly direction, until he reached the fort, eighty miles away. Thus in ten days Tinkham had covered two hundred miles over the plateau between the Milk and Marias rivers, a route about seventy-five miles north and west of that of the main train. He had, moreover, examined

[35] *Ibid.*, 262: "Nature seemed to have intended it for one of the great highways across the continent."

[36] He describes them as "Distinct from each other, and isolated from any mountain group, they have been thrown up high above the surrounding country, and have long served as the watch-towers and land-marks of the roving tribes ranging for a thousand miles distance, north, south, east and west. Assiniboines, Crows and Blackfeet, all know them well in their geography, and their summits are marked with their monumental stone heaps, and retain the lodges where some war party has waited the favorable moment to pounce upon the unguarded and isolated wanderer of the plain below" (*Pacific Railroad Reports*, I, 228).

the Milk, Marias, and Teton rivers for a great part of their course.[37]

From Fort Benton to the Bitter Root Valley.—After extended conferences with Saxton and Grover, Stevens saw the need of haste in crossing the mountains before the severe winter snows set in. In order better to develop the country and with greater dispatch, he determined to cross the divide with only a pack train. Moreover, he decided to break up his party, sending Saxton down the Missouri by boat to St. Louis, and leaving Doty in charge of the equipment at Fort Benton with instructions to make side explorations and take meteorological observations during the winter.[38]

The main party, in charge of Lieutenant Donelson, departed from Fort Benton on September 16, while Stevens remained behind to treat further with the Indians. While delaying at the fort he was joined by Stanley, who, as mentioned above (p. 57), had been sent on an expedition to the Piegan camp at the foot of Cypress Mountain, in British possessions. Leaving Fort Benton on the eleventh, he had gone by way of the Three Buttes to Milk River and thence to Lake Pakokee. Reaching Cypress Mountain on the fourteenth, he had arranged with the Piegans for a conference. About one thousand Indians returned with him as far as the Milk River to hunt; and thirty families continued with him to Fort Benton in order to meet Governor Stevens.[39]

On September 21, Stevens met with the Piegans, Bloods, and Blackfeet. The latter tribe offered to meet with the Gros Ventres, the Flatheads, and the Nez Percés in council the following year in order to settle their long-standing difficulties. On the twenty-second Stevens left the fort, having dispatched Saxton in a keel

[37] See *Pacific Railroad Reports*, I, 226–230 for report and itinerary of Tinkham's reconnaissance of the Three Buttes.

[38] Stevens to Secretary of War Davis, September 18, 1853, *ibid.*, I, 26–32.

[39] Report of Stanley, in *Pacific Railroad Reports*, I, 447–449.

boat down the Missouri to St. Louis, and Grover in a smaller boat on a minute reconnaissance of the river from the Great Falls to the mouth of Milk River. On leaving the fort he expressed the feeling that the "short sojourn there had not only let us into the experiences and vicissitudes of life in a remote mountain post, surrounded by numerous Indians, and accessible to information from home but once or twice a year, but we felt also that we had made warm and fast friends of all the inhabitants of that region—voyageurs, Indians, and gentlemen of the Fur Company. And I ascribed it mainly to one reason, that they felt that beneficial results would flow from the expedition...."[40]

Stevens's route, on leaving Fort Benton, lay up the Teton River, crossing then to the Sun. His objective point was the pass lying between the Crown Buttes and the Rattlers, two prominent landmarks to the west. Continuing southwest on the Blackfoot trail, he crossed Beaver Creek, tributary of the Missouri, and later Dearborn River. He then crossed the dividing ridge of the Rocky Mountains by way of Cadotte's Pass, and entered on the western side, following the valley of the Blackfoot Fork. He soon overtook Donelson, and it was decided to continue to the Bitter Root Valley. Stevens here learned of the reconnaissance of Tinkham, who had gone up the Sun River to its headwaters and then followed south along the eastern base of the divide, crossing likewise by way of Cadotte's Pass. And it was seen from the evidences of recent camps that Lander also had preceded the main party to the Bitter Root Valley. The main train now continued down the valley of the Blackfoot, and, crossing the prairie of that name, reached the Hell-Gate Fork of the Blackfoot. Stevens followed this stream to its junction with the Bitter Root and then, turning south, he ascended the valley of the latter to St. Mary's village and Fort Owen. At

[40] Stevens, "Narrative of 1853," *ibid.*, XII, pt. 1, p. 99.

the latter place he found Lander, who had been in the valley for ten days.

Lander, under instructions from Donelson, had run a line from the Marias to the Teton River and thence to the Sun River, six miles below its forks. He then continued to the upper waters of the Dearborn and along the foothills of the Rockies, crossing the latter by a pass called by Stevens the Lewis and Clark Pass (the pass traversed by Captain Lewis on his return trip from the Bitter Root Valley). Lander then continued down the Blackfoot Valley, and, crossing the Hell-Gate Fork, reached the Bitter Root River and Fort Owen. He was, however, unable to make any observations bearing on its practicability as a railroad route.[41]

Stevens delayed at Fort Owen, which was located on the Scattering Fork of Lewis and Clark, a tributary of the Bitter Root, from September 29 until October 3, preparing to move all the parties west.[42] On the thirtieth he was joined by Lieutenant Mullan, who, as noted above, had left Fort Benton on September 9 to visit the Flathead camp, reported to be "beyond the Muscle Shell," and conduct a delegation of the Indians to the council to be held at St. Mary's village.[43] Crossing the Missouri at Fort Benton, Mullan pursued a southeasterly direction, passing along the sources of the Judith River to what he believed to be the Muscle Shell.[44] He then traveled southeast for almost eighty miles to the country of the Flathead, or Sellish, Indians. After conversing with them in French, which one of their number

[41] Report of F. W. Lander, in *Pacific Railroad Reports*, I, 275–276.

[42] The encampment in the Bitter Root Valley was called Cantonment Stevens in honor of the leader of the expedition; and the town of Stevensville perpetuates his name in that valley to the present time.

[43] Report of Lieutenant J. Mullan, October 2, 1853, in *Pacific Railroad Reports*, I, 59. Report of Lieutenant J. Mullan, January 20, 1854, *ibid.*, 301.

[44] Lieutenant Warren in *Pacific Railroad Reports*, XI, 65, gives evidence that this must have been the Yellowstone River as mapped and described by Captain Clark on the Lewis and Clark expedition.

understood, he succeeded in persuading four of their chief men to accompany him on his return journey. His return route led back to the Muscle Shell, and he then followed this stream to the mouth of its northwest branch, probably Shields River. After ascending the latter stream and crossing the Belt Mountains, he descended along the headwaters of Deep, or Smith's, River to the Missouri, almost at its sources. Crossing the Missouri, Mullan followed up Prickly Pear Creek to the divide between the waters of the Columbia and those of the Missouri. This divide he crossed by means of the Hell-Gate Pass,[45] and descended the valley of Little Blackfoot River to its junction with the Hell-Gate, or Deer Lodge, Creek. Following the latter, he reached the trail of the main party at Big Blackfoot Fork and followed it to Fort Owen. His reconnaissance of four hundred and fifteen miles opened up a vast area, known and accessible only to the hunters and trappers. Two days were utilized by Stevens while at Fort Owen in a council with the Nez Percés and Flathead Indians. He reassured them of government protection and told them of the benefits to be derived from trade and agriculture. He urged their attendance at the great council of all the Indian tribes to be held at Fort Benton the ensuing year; and he asked that they persuade other Indian tribes to the west to attend. Stevens, moreover, promised to leave Lieutenant Mullan at Fort Owen to protect and aid the Indians in every way possible.

From the Bitter Root Valley to the Spokane.—Although the country between Fort Owen and the Pacific had already been traversed and examined by Saxton, Stevens determined to send Donelson over the same route.[46] Lander was to assist Donelson, making all side explorations and collecting data bearing on the

[45] This pass today bears the name of Mullan's Pass, after the engineer. The city of Helena lies near its eastern entrance.

[46] Stevens to Donelson, October 2, 1853, in *Pacific Railroad Reports*, I, 62–63.

question of railroad construction. Lander, leading the advance party, departed from Fort Owen on October 2; Donelson set the main train in motion the following day. Passing from the Bitter Root Valley to the Jocko River, Donelson followed it to Clark's Fork; Lander meanwhile followed the Bitter Root Valley to Clark's Fork.

While Stevens remained for a day or so in camp at Fort Owen, he was joined by Tinkham, who had reconnoitered Clark's Fork and the Jocko River.[47] Tinkham immediately received instructions to once more cross the mountains with a Flathead Indian as guide, and to explore the Marias Pass, still believed by Stevens to be the most practicable. After reaching Fort Benton and procuring fresh horses, he was to return to the Bitter Root Valley, accompanied by Mr. Doty, by way of some route south of those already explored. From the Bitter Root Valley he was to go by way of the southern Nez Percés trail across the Bitter Root Mountains to Fort Walla Walla.[48] Stevens, on the same day, directed Dr. Suckley to descend the Bitter Root River, Clark's Fork, and the Columbia in a canoe.

Having issued his instructions to Tinkham and to Mullan,[49] who was to remain in the valley, Stevens set out with a small party, following Lander's trail down the Bitter Root.[50] The Bitter Root Mountains were crossed[51] near the headwaters of the St. Regis Borgia to the Coeur d'Alene River, and soon he arrived at the mission of that name, located not far from the lake.

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[47] Report of A. W. Tinkham, February 18, 1854, *ibid.*, I, 273–275.

[48] Stevens to Tinkham, October 3, 1853, *ibid.*, I, 64–65.

[49] Stevens to Mullan, October 3, 1853, in *Pacific Railroad Reports*, I, 61–62.

[50] Stevens made constant use of the narrative of the Lewis and Clark expedition, and paid high tribute to the accuracy with which they described the features of the valley.

[51] The pass by which he crossed the Bitter Root Mountains, and a peak in the immediate vicinity, today bear the name of "Stevens" in honor of the explorer.

This mission,[52] presided over by three French Jesuits, was situated on an eminence and furnished employment to many Indians. The Indians were paid for their outdoor work with tickets, and with these tickets, vegetables, manufactured articles, etc., could be purchased from the mission supply.

After leaving the mission, Stevens passed along the northern edge of the lake, and followed the Coeur d'Alene River across the prairie to Saxton's trail. After crossing the Spokane River he arrived at the old Spokane House, a relic of the widespread activities of the Northwest Company, which was then in ruins. Upon learning from some Spokane Indians that there was a large party opposite Fort Colville, Stevens determined to go thither, making the journey from Spokane House to the fort in a single afternoon. There he found Captain McClellan, and from him he received a report of his operations from the Pacific.[53]

McClellan's Examinations of the Cascade Range.—McClellan's party, known as the western division, had been organized at Vancouver on June 29, 1853, but, on account of various difficulties, had been unable to set out until July 18. The party consisted of Captain McClellan, in command, Lieutenant J. K. Duncan, Lieutenant S. Mowry, Lieutenant H. C. Hodges, J. F. Minter, civil engineer, George Gibbs, geologist, and J. G. Cooper, naturalist. In addition there were twenty-eight soldiers and a number of packers and hunters, making in all, sixty-six in the party.

Setting out from Fort Vancouver, McClellan pursued a northerly direction by way of Yahkote to the Cathlapoot'l River. The country traversed was thickly covered with forest and undergrowth and offered little inducement to settlement. After

[52] The mission of the Sacred Heart for the Coeur d'Alene was another monument to the work of Father de Smet among the Indians of the Northwest.

[53] McClelland's full report and itinerary, rendered February 25, 1854, in *Pacific Railroad Reports*, I, 188–202. See *ibid.*, I, 24–25 for report made from Ketetas Prairie September 18, 1853.

following for several days along the Cathlapoot'l he crossed a dividing ridge to the settlement of Chequos. From this point five large mountains were to be seen: Rainier, St. Helen's, Adams, Hood, and Jefferson. Believing, from the contour of the land, that he would be unable to find a suitable pass near St. Helen's, McClellan determined to explore north to the vicinity of Mount Rainier. Leaving Chequos, he crossed the Nikepun River and Talik Plain where his route turned almost due north. Soon after crossing the Pisco River he passed by the old Indian fortification at Simque, and, on August 17, encamped on the Atahnam River, one and one-half miles above the old mission of that name. This mission, in charge of two fathers, was inhabited only in the summer time. After spending two days at the mission obtaining information of the country and the Indians, McClellan moved forward to the Wenass River. Here a depot camp was established and parties were at once made up to examine the surrounding country.

One of the first reconnoitering expeditions to be sent out was under the command of Lieutenant Hodges. His instructions[54] ordered him to proceed to Fort Steilacoom on Puget Sound in order to procure provisions and additional pack animals. The route to be pursued by Hodges was that by way of Nachess (Natches, Natchess) Pass. A second party under Duncan was directed[55] to cross to the main Yakima River and examine the upper portion of that valley, obtaining all possible information in regard to the surrounding country particularly in the north. A party under Gibbs received instructions to examine the Yakima Valley south to the Columbia.

On the twenty-third McClellan himself led a party to examine the Nachess Pass, crossing from the Wenass into the valley of the Nachess River. Following the latter river, he crossed the

[54] *Pacific Railroad Reports*, I, 190.
[55] *Ibid.*

summit of the dividing ridge into the valley of the Green River on the western slope. He then followed down the Green to the Skamish (Skywhamish), and, being satisfied of the practicability of the pass for railroad construction, he turned back and reached depot camp on the Wenass late on the twenty-ninth.

Receiving word from Hodges at Steilacoom that provisions were difficult to procure and that mules were scarce, McClellan determined to reduce his party; accordingly a portion was sent back to the Dalles in charge of Lieutenant Mowry. After Duncan and Gibbs had returned from their examinations of the upper and lower Yakima, respectively, McClellan, on September 3, moved his camp to Ketetas Prairie on the main Yakima. From this point he led a reconnoitering party to examine passes at the head of the river. After spending a week in this operation, he decided that the Yakima Valley was entirely practicable for railroad construction.[56]

After receiving detailed reports from all his reconnoitering parties, McClellan, on the nineteenth, set out to cross the mountains between the Yakima and the Columbia. This summit proved to be more difficult than was at first expected, but the Columbia was finally reached on the twenty-first and camp placed on the Pisquouse River at its mouth. From this point the route lay up the Columbia Valley, crossing the Ent-te-t-kwa River, Lake Chelan, and Mellow River to Fort Okinakane,[57] which was reached on the twenty-seventh. This fort consisted of three log buildings surrounded by a stockade in the form of a square, with blockhouses at the extremity of one diagonal.[58] It was occupied at that time by a Mr. Lafleur and two Kanakas as

[56] McClellan to Secretary of War Davis, September 18, 1853, in *Pacific Railroad Reports*, I, 24–26.

[57] Present Fort Okanogan; the river name retains its original spelling.

[58] This post had been established in 1811 by the Hudson's Bay Company and strongly reënforced in 1825 by Dr. McLoughlin, but with the gradual withdrawal of the Company, its importance had declined.

a garrison.[59] Learning from them that there was a good foot-trail leading up the Methow River McClellan determined to explore this route. He was able to follow up the Twitap River for a short distance, but finding the route uterly impracticable for a railroad, he returned to Fort Okinakane.

On October 5 the party once more set out from the fort, following the Okinakane River, and on the ninth reached their most northern point, thirteen miles south of the great Lake Okinakane in latitude forty-nine degrees and twenty-six minutes. Thorough search was made for a pass in this region, but none was found with a practicable connection with the Pacific; McClellan accordingly decided that the only available pass through the Cascade Range was the most excellent one by way of the Yakima River,[60] the Nachess Pass being also favorably regarded.

On the eleventh, McClellan turned back from the Lake, and on the twelfth departed from the Okinakane River at its forks. His route after crossing the small range of mountains to the east, led him down the Ne-hoi-al-pit-kwa River; and, on the seventeenth, he reached the Columbia once more, this time opposite Fort Colville. The following day the entire party crossed the river in canoes to the fort, which was second only to Vancouver in size and importance.[61]

McClellan was already preparing to push forward to St. Mary's village with a small party, when, on the nineteenth, he was joined by Governor Stevens. Since McClellan had not run a direct line from Puget Sound to the fort, and Stevens thought this to be very necessary and important, he determined to bring the entire party together at a camp south of the Spokane River

[59] *Pacific Railroad Reports*, I, 197.

[60] *Pacific Railroad Reports*, I, 198. Neither pass, however, has been utilized for railroad construction. The Northern Pacific crosses by Stampede Pass between the Yakima and Snoqualmie (Snoqualmoo).

[61] *Ibid.*, I, 199. This fort had been established in 1825 by Dr. McLoughlin to supersede Spokane House as a connecting link with New Caledonia.

in order to accomplish this design. From this point, he would have parties move to the Sound and to the lower Columbia. He therefore sent word to Lieutenant Donelson, who was yet on the Clark's Fork, to meet him near Spokane House. Stevens's plans for the prosecution of the remainder of the survey were as follows: Captain McClellan and Mr. Lander would cross the Columbia near the mouth of the Yakima River and carry the railroad line through the Snoqualmoo Pass to Puget Sound; Lieutenant Duncan would cross the Columbia just above the mouth of the Snake and mark out a route to Fort Vancouver along the north bank; Hodges would proceed at once to Fort Walla Walla and thence continue down the Columbia, having the main train in charge; Lieutenant Donelson would advance from Clark's Fork to Coeur d'Alene Mission and thence by trail direct to Walla Walla.[62]

Having determined upon the above plan of operation, Stevens, on October 21, departed for Spokane House. With him went McClellan and his party, their route leading down the valley of the Slawntelus River and crossing thence into the valley of the Chemikane. On reaching the Spokane River, they descended it as far as Spokane House, and there crossed to the central camping point, Camp Washington. While delaying at this point, Stevens, on October 28, was joined by Lieutenant Donelson, who had been operating independently since leaving the Bitter Root Valley. He had made a survey of the valley of Clark's Fork to Lake Pend d'Oreille, and then, skirting the eastern and northern borders of the lake, was once more upon the Clark's Fork. After leaving the Fork, he crossed the Coeur d'Alene Prairie to the river of that name, and thence across country to Camp Washington.[63]

[62] *Pacific Railroad Reports*, XII, pt. 1, p. 126.

[63] See *Pacific Railroad Reports*, I, 269–277, for full report of his explorations from the Bitter Root to the Columbia; see *ibid.*, I, 360–363, for itinerary.

From the Spokane to Puget Sound.—While in camp on the Spokane River, Stevens had opportunity to notice the poor condition of his stock and the scarcity of his provisions. The state of mind of his men, due to fear of the Indians, also caused him to alter his earlier plans. He therefore decided to send the entire party to Olympia by way of Walla Walla, the Dalles, and Fort Vancouver, meanwhile making a careful survey of the route.[64] Accordingly, the party set out from Camp Washington on the thirtieth, pursuing a southerly direction. The main Peluse River was reached on November 2. From this point Stevens pushed ahead rapidly, and, by a forced journey, reached Fort Walla Walla in a single day. The main train proceeding more slowly crossed the Snake River on the third, passing along the north bank of the Touchet River, and reached the fort the day following.

While maintaining his headquarters at Fort Walla Walla from the third to the eighth of November, Stevens made various reconnaissances in the vicinity; three days were spent on an expedition to McBarne's Fort and Whitman's Mission. On the sixth of the month, Osgood was dispatched to the Dalles with the wagon train of the division, and, on the eighth, Stevens, after sending Lander on a reconnaissance of Snoqualmoo Pass and receiving reports of Donelson and McClellan, departed for the Dalles by canoe. After an uneventful journey he reached the Dalles, and from there set out for Fort Vancouver and Olympia, arriving at the latter place on November 25. Soon Donelson and McClellan arrived for office duty and Mr. Lander likewise. The latter had been unsuccessful in his examination of Snoqualmoo Pass; Stevens therefore dispatched a letter, to await Mr. Tinkham at Walla Walla, instructing him to cross to Puget Sound by Snoqualmoo Pass. He had two purposes in

[64] His orders were issued from Camp Washington on October 29, 1853 (*ibid.*, I, 66–67).

mind: first, to obtain positive information in regard to the depth of the snow in the winter months, and second, to connect his work with the Sound itself.[65]

Meanwhile, an examination was being made of the country near Shoalwater Bay on the Pacific by Mr. Gibbs, McClellan having sent him out when Gibbs arrived at Fort Vancouver. Gibbs canoed down the Columbia to Baker's Bay and thence portaged to Shoalwater Bay. The object of his exploration was to discover a route that would connect this bay with the interior. But Gibbs, after several attempts, was compelled by the roughness of the country to turn back.[66]

Explorations were also made of the Sound itself, with Olympia as the starting point. McClellan made the first exploration, going down the Sound in order to select a favorable port as the terminus for the railroad. Soon Stevens and Gibbs embarked on a trip down the Sound in order to visit and take a census of the Indian tribes, to examine the Sound, and to visit Vancouver's Island and its chief port Victoria. On this reconnaissance, they put in at Steilacoom, Seattle, Skagit Head, Pennis Cave, and Bellingham; they also went up the channel as far as De Rosario, De Haro, and Victoria, and, on the return along the west shore, visited Port Townsend.

Meanwhile the reconnoitering and detached parties were arriving at Olympia. Among the first to come was Lieutenant Arnold, who had been sent from Fort Colville with instructions to examine the Columbia River to the mouth of Clark's Fork. He accomplished the journey by canoe with little difficulty except for portages. On his return to the fort he set out on the thirteenth of November to examine the east bank of the Columbia to Fort Walla Walla, by way of the Grand Coulee. The route followed by Arnold in this section of his reconnaissance closely

[65] Stevens to Tinkham, December 12, 1853, in *Pacific Railroad Reports*, 617–619.

[66] Report of Mr. Gibbs, *ibid.*, I, 465–473.

paralleled the Columbia as far as the Spokane River, which was reached about five miles above its mouth. Following, then, a rocky and difficult trail, he went around the Great Bend as far as the Grand Coulee. Arnold entered the mouth of the Coulee (here ten miles in width) by way of the river, and turning south followed an old trail of the Hudson's Bay Company up the Coulee. Continuing south, and following the beds of dry rivers, he reached the Columbia once more on November 24. His route then lay down that river, passing by the mouth of the Yakima and crossing the Snake River to Fort Walla Walla. Proceeding then by land to the Dalles and Fort Vancouver, he arrived at Olympia by way of Cowlitz River and Landing.[67]

Dr. Suckley also reported to Governor Stevens at Olympia, having made a journey entirely by canoe from the Bitter Root Valley to Fort Vancouver. He had set out from Fort Owen on October 15, and had descended the Bitter Root River, which, up to that time, was unknown and unmapped. Upon reaching Clark's Fork, he directed his course down that stream, and, on November 8, reached the St. Ignatius Mission,[68] situated to the northwest of Lake Pend d'Oreille. In all this distance Suckley had been forced to make but two portages, one of these being at the Cabinet. Suckley found the mission to be in a very prosperous condition after nine years of existence. The missionaries, of whom Father Hoecken was chief, had built there a large dwelling house, windmill, shops, barns, cow-sheds, and a large church. All sorts of vegetables were raised and a large amount of manufacturing carried on at the mission.

While at the mission, Suckley misunderstood his orders and, instead of proceeding as usual by canoe, he set out for Fort Colville by horse. After resting there a few days, he again embarked in a canoe on the Columbia below Kettle Falls, and

[67] See *Pacific Railroad Reports*, I, 282–286, for full report of Arnold made February 5, 1854.

[68] Founded in 1843 by Father de Smet for the Pend d'Oreille Indians.

reached Vancouver on December 6, after making two portages, one at the Dalles and one at the Cascades. His journey from Fort Owen had occupied fifty-three days, or two days less than the number employed by Donelson and the main train; the approximate distance traveled was one thousand and forty-nine miles. He had gathered many specimens for the natural history collection of the party, and in his diary he gives many excellent descriptions of the Indian tribes with which he had come in contact.

On January 21, Stevens at Olympia received information that Mr. Tinkham had reached Walla Walla and was preparing to make his examination of Snoqualmoo Pass. On the same day, McClellan reported on an attempted examination of the Yakima passes from the western side.[69] One attempt was made by land by way of Steilacom, but this ended in failure. He then proceeded by canoe up the Sound to the mouth of the Sinahomish River, and thence up the valley of this river and that of its south fork, the Snoqualmoo, to the falls of the latter. But on trying to advance farther he was stopped by the snow and consequently returned, reaching Olympia on January 21.

Independent Reconnaissances of Mr. Tinkham.—A few days later Tinkham also arrived at Olympia. He had been operating independently of the main party since leaving the Bitter Root Valley. Starting on October 9, 1853, he had followed the Jocko River to the Flathead, and then descended the broad valley of the latter to Flathead Lake. Passing along the western border of the lake he had ascended by the right bank of a stream which he also called Flathead River, but which later received from Lieutenant Mullan the name of Maple River. Then turning east, on October 20 he crossed the summit of the Rocky Mountains by way of Marias Pass. After following the valley of the Marias

[69] Stevens to Davis, January 31, 1854, in *Pacific Railroad Reports*, I, 620–622.

River for a distance, he crossed it to the Teton and followed the latter to Fort Benton. The distance traveled by Tinkham from the Jocko River to the fort was estimated at two hundred and ninety-five miles.

On his return journey from Fort Benton, Tinkham set out on October 31 and followed up the Missouri by way of Belt Mountain Creek to Prickly Pear Creek. There he struck the old route of Mullan, made in September, 1853, on his return from the Flathead country, and on it crossed the divide by Hell-Gate Pass. The trail then led down the Little Blackfoot and Hell-Gate rivers to the Bitter Root and Cantonment Stevens.

Tinkham remained in the Bitter Root Valley until November 20, when he again set out to examine an entirely new route to Walla Walla. He ascended to the head of St. Mary's Valley and then crossed the Bitter Root Mountains on the southern Nez Percés trail. This trail was found to be very difficult to traverse, and, at one point near the head of the Kooskoosky River, Tinkham was delayed for seven days by the snow. By slow stages, however, he was able to pass along the divide between the Kooskooskia and Snake rivers, and on December 18 struck the Clearwater just above the mouth of the Kooskooskia. After delaying five days among the Nez Percés Indians there he set out for Walla Walla, following the Clearwater to its junction with the Snake, and then turning south crossed the headwaters of the Two Cañon and Touchet rivers to Fort Walla Walla on the Columbia.

Receiving there further instructions to examine the Snoqualmoo Pass,[70] he resumed operations on January 7. His route lay up the Columbia as far as the Yakima and thence up the valley of the latter stream. His journey was unobstructed, and the route was found favorable as far as Lake Kleallum, which was reached on January 17. Giving particular attention to the depth

[70] See above, p. 70.

of the snow, he passed from Lake Kleallum to Lake Kachess and thence on to Lake Kitchelus. After he reached the summit of the Cascades the snow rapidly disappeared on the western side. Tinkham's route lay down the Nooknoo River, and passed to the south of the lake of the same name. He then crossed the ridge north to the falls of the Snoqualmoo and followed the valley of the latter for a short distance. After leaving the river, he pursued a circuitous route, arriving at Seattle on January 26. Owing to the lack of instruments, he had been unable to minutely determine the practicability of Snoqualmoo Pass for railroad construction,[71] but was convinced that snow would be no great obstacle.

Grover's Independent Reconnaissance.—Governor Stevens was preparing to leave Olympia for Washington in order to make his preliminary report to Congress when the reconnoitering party headed by Lieutenant Grover arrived from Fort Benton. Grover had been left at Fort Benton in September, 1853, to make an examination of the Missouri River and to report on its practicability for navigation. He carried out his instructions with the greatest thoroughness, and was able to report not only upon the navigability of the river from Fort Benton to the mouth of the Milk River, but also upon the nature of the adjoining country and its practicability for settlement.[72]

Grover remained at Fort Benton until January 2, 1854, when he set out to cross the mountains with dog-sleds, and thereby to obtain the much needed information on the amount of snowfall

[71] *Pacific Railroad Reports*, I, 63. McClellan (*ibid.*, I, 182) believed that not less than twenty-five feet of snow would be found in the pass in ordinary winters, while Tinkham had reported but seven. Governor Stevens, however, was inclined to accept Tinkham's view. This led to a severance of friendly relations with his chief assistant, which lasted until the two met in Washington during the war, when a reconciliation took place. For full report and itinerary of Tinkham's route from Fort Owen by the southern New Percés trail to Walla Walla, see *ibid.*, I, 374–377.

[72] See *ibid.*, I, 488–498, for final report of Grover on his survey of the Missouri.

in the passes. His route lay from the Teton River to the Sun and thence to the Dearborn; he ascended a tributary of the latter to the dividing ridge east of the headwaters of the Columbia River. After a steep ascent and descent on the west, he reached and followed the Blackfoot River. This portion of the journey was very difficult; the trail was obliterated by snow and dangerous from ice. Moreover, provisions became low and on January 21 the only food to be had was pancakes cooked in candle grease. But after striking the Hell-Gate Fork on the twenty-first, and soon the Bitter Root, the journey to Fort Owen was easily made.

Grover tarried at Fort Owen and Cantonment Stevens until January 30. Leaving there his dogs and sleds and procuring horses from Lieutenant Mullan, who had been left in charge at the fort, he resumed his march toward the Pacific. His route lay down the Bitter Root River to the mouth of the Hell-Gate and then passed through the "Defile of Coracah" to the Jocko River. Reaching the Flathead River he ascended it for a distance and then passed west across the Kammas Prairie and Horse Plain to Clark's Fork. As he followed down the valley of the latter, his trail was often made difficult by snow and the forests. Upon leaving Clark's Fork he crossed the Spokane Prairie to the river of that name. He then turned south and went by way of the Peluse and Snake rivers to Fort Walla Walla. Procuring fresh horses at the fort he pushed on to Fort Dalles and thence to Olympia where he made his report.[78]

Explorations of Lieutenant Mullan.—Another detached party that was making known a vast area of the country between Fort Benton and Puget Sound was that under the command of Lieutenant Mullan. During his travels he journeyed more than nine hundred miles and crossed the Rocky

[78] For the final report and itinerary of Grover of his examinations between the headwaters of the Missouri and the Dalles of the Columbia, see *ibid.*, I, 498–515.

Mountains six times, four times being in midwinter. Mullan, as has been noted above, had been detailed by Stevens to remain in the Bitter Root Valley to protect the Indians and to develop the surrounding country by surveys. His first reconnaissance began at St. Mary's village on the Bitter Root River on October 14, 1853. The purpose of this expedition[74] was to run a line from Fort Owen south to Fort Hall on the main emigrant road. His route lay up the Bitter Root Valley forty-three miles to the forks of the river, thence following the southeastern fork to its headwaters. Passing Big Hole, or Wisdom, River near its source, he turned south across Big Hole Prairie, a depression fifty miles long and fifteen wide. Then crossing an intervening ridge he descended Horse Prairie Creek, the principal tributary of Jefferson Fork (of the Missouri), to its junction with Red Butte Creek. From the valley of the latter stream he crossed the Rocky Mountains to Medicine Lodge Creek. His route then led past Market Lake and along the left bank of the Snake River to Cantonment Loring and Fort Hall, which he reached on December 13.

On December 19, Mullan started on his return trip from Fort Hall, going north over the same route to a point twenty miles above where he had crossed the Snake. He then turned to the northeast and ascended the valley of High Bank Creek, and on the twenty-fourth crossed the Rocky Mountain divide by a wagon road leading to Fort Hall and one often used by the missionaries. This pass lay to the east of the one traversed by Mullan in going to the fort. He then continued a northerly course across the branch of Jefferson Fork. Passing the divide between the Wisdom and Hell-Gate rivers on December 31, he was once more on the waters of the Columbia. His route then led down the Hell-Gate to the Bitter Root and thence to Fort Owen. Thus in forty-five days he had traversed more than seven hundred miles;

[74] Stevens to Mullan, October 3, 1853, *ibid.*, I, 61–62.

he had crossed the Rocky Mountain divide four times in four different places, and had found no snow that would be an obstacle to railroad construction.[75]

Mullan, while wintering at Fort Owen, learned from several sources that a practicable pass for wagons existed in the Rockies; and on March 2 he set out to prove this to his own satisfaction. By following the Hell-Gate and Little Blackfoot rivers, and threading Hell-Gate Pass, he reached Fort Benton in twelve days, and after three days he set out on his return with a loaded wagon. His route lay across the table-land between the Teton and Missouri rivers, thence to the Sun and the Dearborn; it followed a line south of that made by Lieutenant Donelson in 1853. From the Dearborn his course led to the mountains, and, after an eight days' journey from Fort Benton, he crossed the divide with no difficulty and followed down the broad and easy valley of the Little Blackfoot and Hell-Gate rivers to the Bitter Root. In fourteen days from Fort Benton he arrived at Fort Owen with his wagon, the first vehicle to cross the mountains in the course of the survey. Mullan regarded the route last traversed as the best that he had examined in the mountain region.[76] This same route was examined and favorably reported upon by Mr. Doty later in the year.

In April, 1854, Mullan received written instructions from Stevens to continue his explorations of the country between the Rocky and Bitter Root mountains as far north as the Flathead Lake and the upper waters of Clark's Fork. Accordingly he set out from Fort Owen, followed down the Bitter Root and Hell-Gate valleys, crossing to the Jocko by way of the "defile of Coracah." Upon reaching Clark's Fork he followed the right

[75] See *Pacific Railroad Reports*, I, 322–325, for full report of this reconnaissance from the Bitter Root Valley to Fort Hall.

[76] *Pacific Railroad Reports*, I, 352. Mullan's report of this expedition was made to Governor Stevens April 2, 1854, while the latter was in Washington, D. C., preparing his statement to Congress.

bank to the Kammas Prairie, and then turned by way of Hot Spring Creek to Flathead River. He directed his course up the river valley to the lake of the same name and then along the western shore of the lake to Maple River.[77] Ascending this stream to its source and crossing the intervening ridge, he reached the valley of the Kootenay and the main river on April 25. On his return route he sought a more direct line to Clark's Fork, and accordingly ascended Tobacco River to its source in the range of mountains west of Flathead Lake. Then crossing an elevated prairie dotted with lakes, he arrived at the headwaters of Hot Spring Creek and followed this stream to the Fork. On May 2 he crossed the Fork, ascended the Jocko and reached the Hell-Gate; then traversing the well beaten trail he arrived at Cantonment Stevens on May 5.[78]

During May and June Mullan made a reconnaissance to the Pend d'Orielle Mission, Fort Colville, and the Spokane River, and made a thorough examination of Coeur d'Alene, or Stevens Pass.[79] In June he received instructions from Stevens, dated at Washington, D. C., June 2, to advance to the Pacific. Mullan therefore determined to mark out an entirely new course;[80] the only route known to remain unexplored was that by the Lou-Lou Fork of the Bitter Root. Mullan set out from Cantonment Stevens on September 19, 1854, following the Bitter Root to the Lou-Lou Fork. As he ascended the river between the waters of the Bitter Root and the Salmon Fork of the Clearwater, by way of the Lou-Lou Valley, his route became more difficult. The entire country was one immense bed of rugged,

[77] This river also bore the name of "Flathead," having been so designated by Tinkham on his reconnaissance. But the name "Maple" has persisted.

[78] See *Pacific Railroad Reports*, I, 516–527, for full report of his examination of the country from the Bitter Root to Flathead Lake and Kootenay, May 8, 1854.

[79] Report of Lieutenant Mullan, November 12, 1854, *ibid.*, I, 528–529.

[80] *Ibid.*, I, 527.

difficult, pine-clad mountains with many small, rich prairies intervening. It required eleven days to traverse the sixty-five miles to the Kooskoosky River. On October 2 he entered on the southeast corner of the great plain of the Columbia at the point where the Kooskoosky, or Clearwater, issues from the Bitter Root Mountains. Following the stream, he reached the Snake on October 5, soon leaving it, however, at its great bend to the south, and crossing the intervening country to the Pelahat, an affluent of the Tukanon (Two Cañon). He then passed to the Touchet and followed it to Fort Walla Walla, arriving there on October 9. There he met his companion, Doty, who had operated from Fort Owen across the Coeur d'Alene Prairie, and together they took the river road of the Columbia to the Dalles and thence to Olympia. The route which Mullan had followed from the Bitter Root Valley had been essentially that pursued by Lewis and Clark in 1805–06. Mullan, in all, had examined three routes across the Bitter Root Mountains. He believed that the one by the Coeur d'Alene River and lake was the best and most practicable.[81]

Governor Stevens, while this most important detached party was yet in the field, had made a hasty trip to Washington, D. C. in order to present to the Secretary of War his report of operations up to April, 1854. This was one of the first Pacific railway reports to be made, and, incomplete as it necessarily was, it attested the thoroughness with which the survey had been conducted and the northern region explored. Stevens was absent from Olympia from March 26 until December 31, 1854, during which time other reconnaissances were being made and reports prepared.

Reconnaissance of Mr. Doty.—One of the detached parties was that under the command of Mr. Doty. This engineer had been detailed by Stevens to remain at Fort Benton in order to

[81] *Pacific Railroad Reports*, I, 537.

make meteorological observations and reconnoiter the surrounding country.[82] After a winter of local activity, he determined to examine the eastern base of the Rocky Mountains from Fort Benton to the northern border of the United States. Accordingly, he set out in May, 1854, accompanied by three men and an Indian boy as guide. He followed the course of the Missouri River to the Great Falls, and then, turning northwest, in fifteen miles struck the Medicine, or Sun, River about eight miles above its mouth. He followed up the valley of this stream to the base of the mountains. His course then led along the east base of the divide to the Marias River, crossing the headwaters of the Teton and the numerous tributaries of the Marias. At the head of the latter was the Marias Pass, which had been examined by Mr. Tinkham in October, 1853. Continuing north, Doty crossed several tributaries to the Milk River and on May 28 reached his most northern point, Chief Mountain Lake, in lower Canada. On June 5 he set out on the return journey south to the Marias River and then southwest along its course, no examination being made of the Pass.

On this expedition Doty had made a thorough exploration of the Missouri along the base of the Rocky Mountains to 49° 30′, and had obtained a thorough odometer measurement of the boundary. He had traced the sources of the Sun, the Breast, the Marias, and the Milk; moreover, he had collected many valuable specimens in geology, natural history, and botany.

Doty remained at Fort Benton until July 8, when with three companions he set out for the Bitter Root Valley. His route was the same as that which the main train had pursued in 1853 to a point within ten miles of the divide of the Rocky Mountains. He then turned due west and crossed on Lander's trail through Lewis and Clark Pass, striking Stevens's trail once more about twelve and one-quarter miles west of Cadotte's Pass (by which

[82] See above, p. 60.

Stevens had crossed). He then followed the general direction of the Blackfoot to the Hell-Gate and the latter to the Bitter Root and Cantonment Stevens. On his return he followed the Bitter Root Valley to the Hell-Gate and up the latter to the Little Blackfoot. He was then on Mullan's trail, traversing almost the same route as Mullan had followed on his reconnaissance from Fort Benton to Fort Owen. Doty arrived at the former place on July 30.

Receiving there instructions from Governor Stevens, dated at Washington, June 2, to proceed to Olympia, Doty set out on September 7, pursuing the old trail to the Bitter Root Valley. After a delay at Cantonment Stevens he advanced by way of Regis Borgia Creek to the Coeur d'Alene Mission, this being the route laid out by Stevens in 1853. From the Mission, however. Doty pursued a more direct route southwest to Walla Walla, south of the Lake, and reached the main Peluse River near its junction with the Snake. From Fort Walla Walla he followed the emigrant road through Nachess Pass, arriving at Olympia on October 24.[83]

After all reports had been made, Stevens was still in doubt as to the Snoqualmoo Pass and urged its further examination; he believed that it would be found to be the most direct and most practicable pass to the Cascades. During the winter months, until active explorations could once more be resumed, councils were held with most of the tribes of the territory and treaties made with many of them. From such discourses Stevens was able to obtain a large mass of information on the character of the country and especially its capacity for settlement. Mr. Doty was also very active among the Indian tribes of the eastern portion of the territory, the Yakimas and the Nez Percés, urging all the tribes to meet in council at Walla Walla.

[83] *Pacific Railroad Reports*, I, 553–565, for full report of Doty's activities during 1853 and 1854.

Stevens's Operations During 1855.—The next year (1855), Stevens was once more willing to continue his explorations. But the government did not deem it advisable to spend more money on this section of the country, since sufficient information had already been obtained to determine the question of its practicability for railroads; and the only portion about which Stevens was in any way doubtful was the Snoqualmoo Pass. Accordingly, his explorations during 1855 were made with no pecuniary assistance whatever from the government, and by them Stevens was able to verify his observations of 1853, especially in regard to longitude. His explorations were, in a measure, authorized by the necessity of urging on the Indian tribes attendance at the large Blackfoot Council.

Stevens set out from Walla Walla in June, 1855, going by way of the Touchet River to the Snake and then following the valley of the latter and that of the Peluse. Having arrived at the Coeur d'Alene Mission, he followed the route of the Coeur d'Alene River and Regis Borgia Creek to the Bitter Root Valley. Upon his arrival there, he held a council with the Kootenay, Pend d'Oreille, and Flathead Indians.

Leaving the Bitter Root Valley on July 18, he followed the usual route by the Hell-Gate and Big Blackfoot rivers to Cadotte's Pass, continuing by the Medicine and Big Blackfoot rivers. From this center he sent out expeditions to Box Elder Creek and Milk River. Mr. Doty, his assistant, made a remarkable trip to the Saskatchewan to recover some horses stolen from the Pend d'Oreilles by the Blackfeet. Doty on this journey covered five hundred and eighty-three miles in fifteen days.

After holding council with the Blackfeet at the mouth of the Judith River, Stevens set out on his return. Upon his arrival in the Bitter Root Valley he learned of an Indian outbreak in the region to the west, and, determining to quell the uprising by surprise, he went by forced marches over the Coeur d'Alene

route. His reason for traversing this route was that the Indians believed it to be blocked with snow, and would least expect him from that direction. He descended suddenly upon the Coeur d'Alene Mission and succeeded in pacifying the Indians there. He then held council with the Spokanes and Coeur d'Alenes upon the Spokane River, quieting them and their Nez Percés neighbors to the south.

Governor Stevens's active operations in the survey for a practicable railroad route having now been concluded, he began an advocacy of the northern road which lasted until his death. His explorations had shown that there was a favorable route from the Mississippi River to the Rocky Mountains either by way of the Missouri or the Yellowstone; that the main divide could be crossed by one of five practicable passes; that the Bitter Root Range, while more formidable could be turned at the north by way of Lake Pend d'Oreille; that there were several practicable passes through the Cascades; and that the valley of the Columbia offered a favorable route to Fort Vancouver and Olympia.[84]

The energy of Governor Stevens had enabled him to make one of the first Pacific railroad reports, on June 30, 1854. His ability is further attested by the fact that his was the only survey from the Mississippi to the Pacific Ocean under a single commander. The zeal and thoroughness with which he had accomplished it were characteristic of the man; and these traits were further displayed in his administration as first governor of Washington Territory.

[84] *Pacific Railroad Reports*, XII, pt. 1, pp. 232–247. Stevens estimated that the distance from Breckenridge on the western border of Minnesota, to Seattle by way of the Missouri and Cadotte's Pass was 1551 miles; the distance by Lewis and Clark's Pass was twenty-five miles shorter (*ibid.*, XII, pt. 1, p. 351).

CHAPTER V

EXPLORATIONS FOR A CENTRAL ROUTE[1]

Captain Gunnison's Explorations between the Thirty-eighth and Thirty-ninth Parallels.—Captain Gunnison, by order of the War Department of May 20, 1853, was directed to commence operations at Fort Leavenworth and "with the escort proceed to the Huerfano river, making such reconnaissances from the Missouri river as will develop the general features of the country, and determine the practicability of a railroad across the plains, and its connexion with the eastern lines of commerce.

"The more minute reconnaissance will continue up the Huerfano into the San Luis valley, and thence through the most eligible pass to the valley of the Grand river, and westwardly to the vicinity of the Vegas de Santa Clara, and thence, on the most advisable route, either along the Nicollet river, or to the west of the ranges of mountains bordering that stream, into the basin upon the route to the Great Salt lake; thence to Utah lake and through the Timpanagos cañon or other passes, and across the Weber and Bear rivers, by the Coal basin, to Fort Laramie."[2] Lieutenant E. G. Beckwith and Mr. R. H. Kern were selected as assistants to Gunnison, the latter, Kern, having for many years conducted operations in the west, both independently and as assistant to Fremont. This field of exploration, the route of '38–'39, was by no means new to Gunnison either, since he had

[1] The report of these operations is contained in *Pacific Railroad Reports*, II, supplemented by 167 pages of vol. X (scientific report). My account has been taken from the itineraries kept by Lieutenant Beckwith, supplemented by letters to the Secretary of War, reports of reconnoitering expeditions, etc.

[2] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 10.

been to Utah with Stansbury in 1847 and 1850, and had already written one of the best books upon the Mormon settlement.

Captain Gunnison followed Governor Stevens into St. Louis in 1853, arriving there on June 4. He immediately arranged to have his supplies and outfit shipped in charge of Kern to a fitting-out camp just below the mouth of the Kansas River, five miles from Westport. While this was being accomplished, Gunnison and Beckwith detoured by way of Fort Leavenworth to secure an escort, reaching Westport on June 19. Like other commanders, he spent much time "in breaking in wild mules," with which he advanced in a rain storm on June 23. The party followed the Santa Fé road, and reconnaissances were made on either side, thereby demonstrating the practicability of a railroad along the emigrant route leading to Salt Lake and Oregon.

It was Gunnison's intention to rejoin the second division under his Lieutenant Beckwith at the junction of Walnut Creek and the Arkansas. For two weeks the survey operated on two parallel routes. Gunnison followed the emigrant road as far as Shuna Munga Creek where it branched off; then he pursued a direct course along the Kansas to Fort Riley[3] on the Republican Fork (or Pawnee River), reaching there on July 4. This fort marked the head of navigation on the Kansas River, from which point supplies were sent overland to the Indian country and to New Mexico. From Fort Riley Gunnison's route lay along the north bank of the Smoky Hill Fork, a section which had never before been examined. Great difficulty was experienced in crossing the numerous tributaries, although the Delaware Indians were zealous to aid them.[4] After cutting off the

[3] Fort Riley was at that time in course of construction.

[4] "Without our Delawares, we could not have affected this work. They plunged into the boiling current with the ropes on their necks, and stretched them across the stream for us, and then passed along the same to slip the noose over the knots." *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 17.

great south bend of the river which begins at Saline Fork, he crossed the river, and, turning southeast, joined Beckwith on Walnut Creek.

Beckwith had followed a route about thirty miles south of that of Gunnison, along the Santa Fé road. Numerous streams flowing into the Kansas and Arkansas rivers were crossed before he reached the junction of Walnut Creek and the latter, where he was to await Gunnison. On Walnut Creek he found a detachment of soldiers under Major Johnson preparing to build a fort (Fort Zarah), for the Kansas, Osage, and Sac Indians were numerous and often troublesome in this region.[5]

After the party had united it continued along the river to a camp on Pawnee Fork. On computing distances there it was found that Gunnison had traversed three hundred and twenty-two miles from Westport by way of Smoky Hill Fork, while Beckwith had gone two hundred and ninety-three miles by the Santa Fé trail. At the Pawnee Fork the trail branched, one following the windings of the Arkansas, and the other leading directly to Fort Atkinson; Gunnison chose to pursue the latter course. At Coon Creek he entered the Neutral, or Hunting, Ground, which separated the Sacs, Osages, and Kansas from their Comanche and Kioway neighbors on the west, and on July 16 the party arrived at the Comanche country, passing hundreds of lodges. On the banks of the Arkansas were placed the camps of the Kioway women and children, the bucks of the tribe having joined the Cheyennes, Arapahoes, Jacarilla Apaches, and Comanches to wipe out the Pawnee.[6]

Continuing along the Santa Fé road north of the Arkansas rapid time was made because the route was so well defined.

[5] He describes them as "filthy, dirty beings, and quite as impudent and pilfering as their wilder brethren to the west." *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 23.

[6] *Ibid.*, 25.

On July 29, the party reached Bent's Fort, which had been abandoned and destroyed four years previous, only the remnant of the walls and towers remaining. Gunnison describes its location as "one of the most favorable points for a military post which is anywhere presented on the Plains.... It is of easy access from its central position, from the east, from Santa Fé, from Taos through the Sangre de Cristo Pass, and from Fort Laramie. It is on an emigrant road from southern Missouri and Arkansas, either by the North Park or Coochetopa Pass; and it is in the heart of the Indian country, accessible to the resorts of the Comanches, Cheyennes, Arapahoes, Kioways, some bands of Apaches, and even occasionally of the Utahs of New Mexico."[7]

From Bent's Fort the route continued along the north bank of the Arkansas. Gunnison was searching for the Huerfano River, which he had been instructed to examine and to cross into the San Luis Valley. On reaching the mouth of the Apishpa River, he thought this to be the Huerfano. Accordingly, the route lay up the valley of the Apishpa, side reconnaissances being made of the numerous ravines and cañons. On August 6 the party turned from the Apishpa Valley toward the Spanish Peaks, striking a wagon trail which led from the Raton Pass to the Pueblo on the Arkansas River, and to Fort Laramie on the Platte.[8] Gunnison followed this road in the direction of Santa Fé and the Cuchara River, and there, ascending a neighboring butte, he thus described the view: "Pike's Peak to the north, the Spanish Peaks to the south, the Sierra Mojada to the west, and the plains from the Arkansas—undulating with hills along the route we have come, but sweeping up in a gentle rise

[7] *Ibid.*, 28. This section between Fort Leavenworth and Bent's Fort by way of Pawnee Fork had been traversed often by both official and unofficial expeditions. Emory, in 1846, had made an accurate survey. Gunnison was, therefore, concerned only in substantiating previous reports.

[8] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 33.

where we should have come—with the valleys of the Cuchara and Huerfano, make the finest prospect it has ever fallen to my lot to have seen."[9]

From this point Beckwith was sent on a reconnoitering expedition to the Greenhorn settlement, which was known to be in the vicinity and to lie east of the Wet Mountains. Beckwith's route lay northwest, crossing the Huerfano, and soon striking the trail which led from Taos to the Greenhorn River near the base of the Wet Mountains. On reaching the valley, he found the sole inhabitants to be six Mexican families who were cultivating wheat, corn, beans, and melons. At the settlement Beckwith engaged a Spanish New Mexican to guide the surveying party across the mountains into the San Luis Valley. On his return to the main camp on the Cuchara River, he followed a more westerly course; and the entire party then moved to the Huerfano. Gunnison believed that a more practicable and shorter route could have been taken direct from the Arkansas to Huerfano Butte; and he was able to say that "no obstruction of any magnitude exists, thus far, to the successful construction of a railroad."[10] After ascending the Huerfano River for a distance, the dividing ridge was crossed by the Sangre de Cristo Pass. The route of the main train was difficult; wagons were held by hand ropes to prevent their being overturned and the labor was the more arduous because of the rarified atmosphere at so great an elevation. The descent into the San Luis Valley was made by following Sangre de Cristo Creek almost to Fort Massachusetts.

After completing his examination of the pass, Gunnison made a reconnaissance of the mountains to the south of the Spanish Peaks. Ascending a high peak, "the view was majestically beautiful, with the Huerfano, Cuchara and Apishpa at their

[9] *Ibid.*, 34.
[10] *Ibid.*, 36.

feet, and towering mountains to the north and south, with the valley of the San Luis to the west.''[11]

Upon the important subject of the snowfall in the Sangre de Cristo Pass, information was conflicting. One guide represented it as being fully ten feet in the winter; another represented it as being unusually free from snow for a mountain pass.[12] Gunnison determined to procure more reliable and experienced guides for the even more difficult country ahead, and accordingly sent Beckwith with one companion to Taos, ''the headquarters of many of the most reliable and experienced of these mountain men.''[13] The route followed by Beckwith lay down the Sangre de Cristo to the Rio Grande and thence down the latter to Taos, more than one hundred miles south of Fort Massachusetts. He found the valley of Taos, as well as that of San Luis, dotted with small settlements and extensively cultivated. Procuring a competent guide at Taos, the return journey was made in thirty hours, over the same route.

On August 23, Gunnison set the party in motion, directing his course to the north and west. Side reconnaissances were sent out with orders to try and discover a more direct route from the Huerfano River; Roubideau, or Mosca Pass (Musca, its original Spanish name), through the Sierra Blanca, was thoroughly examined, in the belief that it would offer a more direct route to California, but it was found to be impracticable; a similar reconnaissance was made of William's, or Sandy Hill, Pass, through which led an excellent Indian trail.

From the crossing of the Rivière des Trois Tetons could be seen the opening in the San Luis Mountains far to the west

[11] *Ibid.*, 39.

[12] The question of the amount of snowfall in the Sangre de Cristo Pass had long perplexed Fremont. It was his determination to investigate this factor that had led to his disaster of 1847. Gunnison's expedition passed too early in the year to make observations, and this induced Fremont to make his winter expedition of 1853–54.

[13] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 39.

which had lured Fremont to the disaster of 1848–49,[14] in which several of Gunnison's party had participated. Gunnison therefore directed that the survey proceed west towards the entrance of Coochetopa Pass.[15] Meanwhile he continued north along the San Luis Valley to the summit of the divide separating the headwaters of the Arkansas from those of the Rio Grande. Crossing by means of a well traveled Indian trail, he reached the "beautiful plains of the Arkansas." As a testimonial of respect to the officer who explored it, Beckwith gave his name to the pass.[16]

Gunnison rejoined his party on Sawatch (or Saguache) Creek near the mouth of the Coochetopa Pass. The ascent from the valley of the San Luis was then made, following the windings of the Sawatch; the slope was gradual until near the summit, where it became abrupt and difficult. For railroad construction a long tunnel was judged to be necessary.[17] The descent on the opposite slope was made by way of Pass Creek and the Coochetopa, the latter being followed to a larger stream which Gunnison called the Grand; "following the eastern slope of the Elk mountains to their termination, Grand river passes to the south and west of them, where it joins the Nah-un-kah-rea, or Blue river of the Indians and mountain men, which arises in the Middle Park, and is erroneously called Grand river on some of the most correct maps."[18] But the previous designation has persisted, and the stream which Gunnison believed to be the Grand today bears his own name, Gunnison, while the Blue

[14] See Dellenbaugh, *Fremont and '49*, 395–397 for an account of his disasters.

[15] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 44.

[16] The pass is now designated as Poncha Pass and is traversed by the southern branch of the Denver and Rio Grande.

[17] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of explorations by Captain Gunnison near the 38th and 39th parallels), p. 48.

[18] *Ibid.*, 50.

River of Beckwith's narrative is the modern Grand River. Gunnison minutely examined the river cañon, while his train was forced to keep to the foothills. The route was found to be so difficult, however, that at Lake Fort the direction of the survey was changed to the southwest to Cebolla Creek and thence across a small divide to Uncompagre Creek. The valley of the latter was followed to the Gunnison River once more, but was so impracticable as to cause the report that a railroad, "if at all, can only be carried on this part of Grand [Gunnison] river immediately along its banks."[19] The cañon of the Grand had terminated at Smith's Fork, thus making the remainder of the valley of the Gunnison River practicable for a railroad construction. Gunnison's party continued to follow the river and to search for the Spanish trail. The Grand River (the Blue River of Beckwith's narrative) was reached on September 19, and its valley followed for several miles to Bitter Water Creek. Then, in detouring to avoid the sharp cañons, a direct route was pursued due west to the Green River. This section was "not only crossed with great labor and difficulty, but it was utterly valueless for occupation and settlement by civilized man."[20]

The party was now upon the well-known Spanish trail, which at this point was in almost constant use by the Akanaquint, or Green River Utahs.[21] These Indians warned the party of a war being waged between the Mormons and the Wah-ka-ras (Walkers) band of Utahs and pointed out the danger of continuing. From the Green River crossing the survey proceeded along the Spanish trail for twenty-three miles, where it turned west towards the Wasatch Mountains. Gunnison, however, continued north to the White River, and, after following it for a

[19] *Ibid.*, 54.

[20] *Ibid.*, 61.

[21] Beckwith (*ibid.*, 62) described them as the "merriest of their race, I have ever seen, except the Yumas—constantly laughing and talking, and appearing grateful for the trifling presents they receive."

short distance, struck an Indian trail which took him southwest. By this route the Spanish trail was reached once more. The trail there, though but seldom used, was still very distinct. Beckwith was able to count from fourteen to twenty parallel trails, of the ordinary size of Indian trails, or horse-paths, on a way of barely fifty feet in width.[22] The survey continued along the Spanish trail and followed the eastern base of the Wasatch Mountains to a low depression in the range. There the trail forked, and Gunnison crossed the dividing ridge by the northern branch. The descent on the western side then followed the general direction of Salt Creek, and near the mouth of the creek, the party, "after months of toiling without a road, and frequently without trails even, in an unexplored and wild country," saw a few wagon tracks.[23] The survey had now reached the great Sevier Valley, and Gunnison was led to remark: "On reaching this plain a stage is attained, which I have so long desired to accomplish: the great mountains have been passed and a new wagon road open across the continent—a work which was almost unanimously pronounced impossible, by the men who know the mountains and this route over them."[24] Continuing down the river valley, turning north, a reconnaissance was made of San Pete Creek, and there Gunnison learned of the Utah uprising, which later was to bring destruction to his party. The main train followed for a distance the California emigrant trail, leading from Great Salt Lake to California by way of Fillmore and Parawan, the Vegas de Santa Clara, and Walker's Pass; then it turned northwest and once more struck the Sevier River at the great bend. From this point Gunnison left with a small party, on October 25, to explore near Sevier Lake, lying to the west; he continued down the river valley, feeling reasonably

[22] *Pacific Railroad Reports*, II, pt. 1 (Beckwith's report of the explorations by Captain Gunnison near the 38th and 39th parallels), p. 65.

[23] *Ibid.*, 69.

[24] *Ibid.*, 70.

safe, although he knew of the trouble between the Utahs and emigrants. But before daybreak, on October 26, he and his small detachment were surprised by a band of young Pah-Utahs. Beckwith was notified of the disaster by a member of Gunnison's escort who had managed to escape, and immediately sent a rescue party. On their arrival at the scene of the disaster, they found Gunnison's body "pierced with fifteen arrows," and seven of his men lying dead around him. Public opinion was ready to charge the Mormons with the disaster. Beckwith, however, who assumed the leadership of the party, believed this to be false, and through the friendly efforts of Brigham Young, the governor of Utah Territory, he was able to recover all of the notes, most of the instruments, and several of the lost arms. Kenosh, the chief of the band of murderers, attributed the attack to the desire for vengeance on the part of a few boys[25] for the murder of their parents by an emigrant party.

On October 31, Beckwith set out from Fillmore for Great Salt Lake, following the California emigrant road. Numerous flourishing villages were passed through, for the Mormons had spread out into the valleys of the Sevier River and Utah Lake, as well as that of Great Salt Lake. On November 8 the party reached Great Salt Lake City and went into winter camp there, as Gunnison had designed.

The route as traveled by Gunnison's party, was one thousand five hundred and sixty-six miles in length, and was, on the whole,

[25] *Ibid.*, 76. Twenty-six Indians of the Parvante tribe were indicted by the Grand Jury in Juab County, Utah, and eight men tried for the murder at Nephi City. The verdicts delivered by the Mormon juries led the government officials to conclude that the Indians were found not guilty by order of the Church. In a subsequent trial before Judge W. W. Drummond it developed to his satisfaction that the whole affair was a deep and maturely laid plot to murder the whole party of engineers and charge the murders upon the Indians (Judge Drummond to Mrs. Gunnison, April 27, 1857, in Gunnison, *The Mormons or Latter Day Saints*, XI). This authority further shows that many outrages were committed by the Mormons upon emigrants and the Indians charged with the deeds only to be acquitted by Mormon juries. Fear of encroachment upon their territory, and particularly the aversion to governmental authority no doubt led to these outrages.

favorable for a railroad; snow in the mountain passes would be no great obstacle, although this feature had not been accurately determined by the party. The only difficulties to be experienced were the lack of wood and water.

Beckwith's Exploration of a Forty-second Parallel Route.—Beckwith, while wintering at Great Salt Lake City, sent the report of the Gunnison expedition to the War Department, and asked for additional instructions. He proposed to conduct an exploration of the Weber River and Timpanogos passes or cañons, as Gunnison had been instructed to do, and then, returning to Salt Lake, survey a route towards the "sink" of the Humboldt, and thence by way of Feather River into the Sacramento Valley. Secretary of War Davis, accordingly, ordered him to examine the Weber and Timpanogos cañons, extending his operations eastward to connect with some well-known point, preferably Fort Bridger. East of Fort Bridger, the War Department felt it unnecessary to make a special survey, since Fremont had traversed and described the country several times and Stansbury had surveyed it carefully as recently as 1849–1850. Beckwith was to operate entirely with what remained of Gunnison's forty thousand dollar appropriation; and if he found, on reaching Fort Bridger, that he had sufficient funds left, he was to return to Great Salt Lake and explore west to the Sacramento Valley along the forty-second parallel.[26]

Beckwith, without waiting to receive his full instructions set out from Salt Lake City on August 4, 1854, for Weber River, traversing the route usually followed in the winter months by the mail carriers to and from Westport. This route lay north to the mouth of the Weber cañon, and then ascended the gorge where the river breaks through the Wasatch Mountains. It was necessary to cross the river innumerable times while examining

[26] Davis to Beckwith, February 21, 1854, in *Pacific Railroad Reports*, II, pt. 2 (Beckwith's report upon the route near 41st parallel), pp. 113–114.

the cañon, and side reconnaissances were made of several tributary streams. Upon reaching White Clay Creek, the survey was directed up the valley, and the route, though snow-encrusted, was found to be excellent. After crossing the divide between the headwaters of the Weber and Bear (tributary of the Snake) rivers, Beckwith passed on to the affluents of the Green. Crossing the Little Muddy to Black's Fork, he ascended the latter stream in a southerly direction to Fort Supply, which lay close to Fort Bridger. From this point the party, with Beckwith reconnoitering ahead, followed for a distance the wagon road leading from Fort Bridger along Henry's Fork of the Green. On his return the same route in general was followed as far as White Clay Creek. Then reconnaissances were made in order to find a direct line to the Timpanogos River south of the line previously run, and it was decided to ascend the Weber River, which flowed from the south, from the mouth of White Clay Creek. From the headwaters of the Weber it was but a short distance to the Timpanogos, and the route then followed the latter through the Wasatch Mountains into the wide valley of Utah Lake.

Beckwith returned to Great Salt Lake on April 23, and on May 1 received his instructions to continue the forty-second parallel line west to the Pacific. On May 3, therefore, he set out along the southern shore of the lake, crossing the Jordan River into the Tuilla Valley. An attempt to cross the Ona-kin Mountains near Grantsomsville (Grantsville) was a failure, so he continued north and was able to turn the range opposite Stansbury's Island. Then turning south, he sought out a pass in the Cedar Mountains;[27] one was found but it was deemed to be too difficult for railroad construction. After leaving the Cedar Mountains Beckwith's route lay southwest to Goshoot[28] Range,

[27] Beckwith was following a route south of that pursued by Fremont in 1845 and by Stansbury in 1849.

[28] Present Goshute Mountains of eastern Nevada.

traversing a dreary desert inhabited only by a few Goshoot Indians.[29] From the base of the mountains reconnaissances were made in search of practicable passes, one being found at Ui-ya-bi, leading into the Fish Creek Valley. Before reaching the main Goshoot Valley, two more small ranges were crossed. Beckwith's route from Great Salt Lake had been very circuitous, as he was anxious to examine new country, and he was certain that a direct route could be taken from Franklin Valley (west of the Goshoot Range) to Salt Lake.[30] The fertile Franklin Valley was inhabited by Digger Indians, who were even more filthy and miserable than their Goshoot neighbors. They spoke a language which was a corruption and intermingling of a few words from those of each of the surrounding tribes.[31]

Beckwith, continuing his exploration, followed the Franklin River in a due north direction, crossing the Hastings wagon road,[32] and reached the base of a spur of the Humboldt Mountains north of the pass of that name. There he was forced to turn south, and travel sixty miles before he was able to cross the main range with his wagons. Humboldt Pass could, of course, have been used, but as this had already been thoroughly examined and reported on by Fremont, Beckwith believed that he should search for a different one. When he had reached a point about twenty miles south of Franklin Lake he noticed an opening which his Digger guide represented as a favorable pass. This proved to be the defile by which the Hastings road crossed the range, and Beckwith conducted his survey along the road

[29] "Extremely filthy and very naked, and emaciated, by starvation during the long winter, during which their supply of rats and bugs fail." *Pacific Railroad Reports*, II, pt. 2 (Beckwith's report upon the route near the 41st parallel), p. 24.

[30] *Ibid.*, 26.

[31] *Ibid.*, 27.

[32] This road had been opened in 1846 by Hudspeth and Hastings for the use of emigrants, and in 1854 was still much used. It connected Great Salt Lake with the Sacramento Valley by way of Humboldt River.

available passes from the east, and was convinced that Feather River lay far to the south; so he declined to push westward into the Sacramento Valley. He retraced his incoming route to the junction of Noble's and Lassen's roads, and then followed the former as far as Black Butte Creek. Here the party divided. One division, following Black Butte Creek to Canoe Creek,[39] reached the upper Sacramento or Pitt River by the valley of the latter. Beckwith, continuing along Noble's road, reached Fort Reading[40] by way of Wolf and Battle creeks.

Beckwith delayed at the fort for three days procuring the necessary supplies for the survey up the Sacramento to the mouth of Fall River, thus completing his line of exploration by the Madeline Pass. This operation occupied seven days, an estimated distance of one hundred and twenty-five miles being traversed. Beckwith was forced to keep to the hills south of the river, the cañons being so steep and narrow as to preclude a survey being made along the banks.

From the mouth of Fall Creek Beckwith turned south to explore the country drained by Canoe (Hat) Creek and if possible to discover a route connecting the Sacramento at the mouth of Canoe Creek with Noble's Pass, but he was unsuccessful. On his return to Fort Reading he thoroughly examined Noble's Pass and Battle Creek, and having completed his survey there, he disbanded his party and reported in Washington on September 12, 1854.

Beckwith's survey from Great Salt Lake City to Fort Bridger and thence west to Fort Reading had occupied one hundred and ten days, from April 4 to July 22. From Fort Bridger to Fort Reading, by way of Timpanogos Cañon, Madeline Pass, and the

[39] Present Hat Creek.

[40] Fort Reading was situated on the Sacramento River at the mouth of Cow Creek about fifteen miles south of the present city of Redding.

Pitt River, the estimated distance was one thousand and twelve miles; by way of Noble's Pass and Battle Creek to Fort Reading the distance could be reduced by forty miles. The entire length of the route from the Missouri River, following closely the forty-first parallel, was estimated at one thousand eight hundred and ninety-nine miles.[41] This line offered many advantages for railroad construction, there being ample wood and water, and the soil being capable of cultivation for the greater portion of the route. The difficulties to be overcome were: first, the snowfall in the Wasatch Range and the Sierra Nevada; and second, the grades of both divides. Modern engineering, however, has rendered these obstacles negligible.

[41] His distances from Fort Leavenworth to Fort Laramie and from Fort Laramie to Fort Bridger were taken from the estimates made by Captain Stansbury in 1849.

CHAPTER VI

WHIPPLE'S EXPLORATIONS ALONG THE THIRTY-FIFTH PARALLEL

Organization of the Party.—Second only to Governor Stevens's in its extent and importance was the exploration conducted by Lieutenant A. W. Whipple from Fort Smith on the Arkansas to Los Angeles on the Pacific along the thirty-fifth parallel. According to instructions from the War Department, dated May 14, 1853, Whipple was detailed to make such explorations and surveys "as will develop the availability for this purpose [railroad] of that portion of our territory which lies near the parallel of 35° north latitude," and to determine "from what point upon the river Mississippi the proposed railway should commence, and whether it may be advantageously connected with any railway already projected, by States or companies, westward from that river."[1] More detailed instructions from the Secretary of War ordered that the reconnaissance continue along the headwaters of the Canadian, and crossing the Rio Pecos turn the mountains east of the Rio del Norte to Albuquerque. Thence westward extensive explorations must determine the most practicable pass for a railway through the Sierra Madre and the mountains west of the Zuñi and Moqui countries, to the Colorado. From Walker's Pass a direct and practicable line must be marked out to either Los Angeles or San Diego. Whipple was instructed to make detailed surveys only where difficulties to railroad construction were offered. The

[1] *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, p. 58.

sum of forty thousand dollars was set aside to defray the expenses of this expedition.[2]

The leader of this expedition, Lieutenant Whipple, had seen service in the unexplored West as a member of the Boundary Survey Commission during the years 1850, '51 and '52. He was assistant astronomer, and later chief astronomer and surveyor of the expedition, and at the beginning of operations had surveyed a line for a railroad from Indianola to El Paso, Texas.[3] He had scarcely returned to Washington in 1853 when he was entrusted with the important exploration for a railroad route to the Pacific. Whipple's party was organized in Washington and so great was the number of applicants for service that many with the highest recommendations were necessarily refused.[4] Lieutenant J. C. Ives was selected as the chief military assistant and was sent forward to Albuquerque in order to make that place a cardinal astronomical point in the survey and to hasten preparations for the necessary explorations in the mountainous region of New Mexico before the approach of winter.[5] Ives was to procure en route the instruments that had been left in San Antonio by the Mexican Boundary Commission. Whipple, however, experienced great difficulty in securing instruments in consequence of the recent outfit of numerous parties for scientific explorations. Commodore Perry had lately gone upon his mission to Japan; Captain Ringgold was completing his operations to explore the North Pacific Ocean; Dr. Kane was in readiness to recommence his search for the lost ship of Sir John Franklin; and Governor Stevens, in charge of the party to

[2] Secretary of War Davis to Lieutenant A. W. Whipple, May 14, 1853, in *Pacific Railroad Reports*, III, pt. 1, pp. 1–2.

[3] Bartlett, *Personal Narrative of Explorations and Incidents*, I, 14. This survey was made upon the sole authority of Commissioner Bartlett to give employment to the large corps of engineers.

[4] *Pacific Railroad Reports*, III, pt. 1, p. 3.

[5] Secretary of War Davis to Whipple, May 14, 1853, in *Pacific Railroad Reports*, III, pt. 1, p. 2.

examine the northern Pacific railroad route, had secured the few desirable transits, magnetometers, and barometers that the others had left.

It was necessary, therefore, for Whipple to delay while instruments were being made, and it was not until May 29 that he was able to leave Washington with his twelve civil assistants. The party proceeded by way of New York and Cincinnati to Memphis. While at Memphis, Whipple learned that the legislature of Arkansas had granted a charter for a railroad between Memphis and Fort Smith; he accordingly deemed it unnecessary to explore this line.[6] He proceeded then by way of Little Rock and Van Buren to Fort Smith, arriving there on June 2, and finding his escort from Fort Gibson awaiting him.

From Fort Smith to Albuquerque.—On July 14 actual operations[7] were commenced. One hundred yards from Fort Smith Whipple left the borders of Arkansas and entered the territory ceded to the Choctaw nation. Progress was slow and three days were required to complete the survey to Scullyville,[8] sixteen miles from Fort Smith. A week was then employed in surveying about this town and in the direction of Poteau to the south. This territory belonging to the Choctaws had been ceded to them in four districts, extending south of the Canadian from the border of Arkansas to that of Texas. The Indians were very peaceable and favorably inclined toward the whites; they were anxious, moreover, that a railroad should be built through their territory.[9]

On July 26 the survey advanced from Scullyville, following a line a little south of west, and crossing plains interspersed with

[6] *Pacific Railroad Reports*, III, pt. 1, p. 4.

[7] The report of Whipple's explorations: itineraries of the main and reconnoitering parties, reports upon Indian tribes, geology, botany, zoology, etc., comprise vols. III and IV of *Pacific Railroad Reports*.

[8] At that time a town of thirty houses. Its name was derived from the Choctaw "Iskuli-felma," meaning *money* (*Pacific Railroad Reports*, III, pt. 1, p. 6).

[9] *Pacific Railroad Reports*, III, pt. 1, p. 9.

forests. Upon reaching Santa Rita Creek, flowing into Sans Bois River, a reconnoitering expedition was sent twelve miles north to the Canadian. As the main train advanced the route became rougher[10] and great need was felt for guides. A Shawnee was finally procured who conducted the party across Caines and La Honda creeks to Coal Creek. Establishing camp on the latter creek, Whipple led a party of reconnaissance northward toward the Canadian. This region was thickly populated with Shawnee, and houses, surrounded by gardens, orchards, and fields of grain were everywhere in evidence. The energy, skill, and public spirit of these Indians had resulted in excellent roads and trails. The Shawnee, however, were reluctant to give Whipple any information concerning the country, and only with difficulty could guides be procured.[11]

From the Shawnee village, side reconnaissances were made to the town of Little River, north of the Canadian, and of the Coal Creek region, south of the line surveyed. The main party then pushed on to the Delaware settlements, following the high ridge between the Canadian and Boggy rivers to Topofki Creek and old Camp Arbuckle.[12] Whipple was now entering a savage and strange country[13] but neither a guide nor satisfactory information could be procured. He therefore followed closely the trail made by Captain Marcy along the ridge between the waters of the Red and the Canadian. This had been the route also of Captain Simpson and Whipple recognized the grove

[10] General Marcy had traversed this section in 1849 on his reconnaissance from Fort Smith to Santa Fé. His route lay south of that followed by Whipple. See *S. Ex. Docs.*, 31 Cong., 1 sess., XIV (562), no. 64, pp. 169–227 for full report of his explorations. Lieutenant Simpson, in the same year, explored a route from Fort Smith to Santa Fé. *H. Ex. Docs.*, 31 Cong., 1 sess., VIII (577), no. 45.

[11] *Pacific Railroad Reports*, III, pt. 1, pp. 16–17. Whipple gives many interesting descriptions of the Shawnee, their mode of life, customs, traditions, etc. (*ibid.*, 14–18).

[12] This post had been abandoned and the troops moved to Fort Arbuckle, thirty miles southwest on the Washita.

[13] *Pacific Railroad Reports*, III, pt. 1, p. 19.

of the Kichai[14] village, a landmark mentioned by his predecessor. A Kichai guide was secured who conducted the party as far as Walnut Creek. The survey then proceeded along the ridge parallel to the Canadian. Many difficulties were encountered on the plateau, particularly a grass fire set by the Indians. Whipple encountered a Huico Indian and in the valley of Deer Creek discovered many evidences of Kickapoo occupation.[15] Soon after leaving the village of Deer Creek, near its head, Whipple passed by "Rock Mary" and other mounds mentioned by Simpson and others.[16] The party then descended into the valley of the Washita, crossing and naming several tributaries, Gypsum, Bear, Elm, and Comet creeks, and then, after sixty miles, leaving the valley to the left, reached Oak Creek, an affluent of the Canadian.

From Oak Creek the survey advanced to Buffalo Creek and thence to Alamo Spring. This was the end of the "emigrant cutoff," and here was seen the trail which Simpson had followed along the bank of the Canadian.[17] Whipple's route then lay along the broad and easy valley of the Canadian, with a reconnaissance of the Antelope Hills which lay south of the proposed line of survey, and which, on the one hundredth meridian, marked the western boundary of the Texas Panhandle. The line along the Canadian offered every facility for a railroad, although the numerous tributaries would require extensive bridging. Whipple was now in the region of the Comanches and Kioways; they were not so friendly as the Choctaws and Delawares had been and a close guard was kept. The Kioways, like the Choctaws and Delawares, had in their possession many

[14] This tribe was "neither numerous nor war-like; but taking advantage of their position, they form a sort of a connecting-link between the wild Indians and the semi-civilized" (*Pacific Railroad Reports*, III, pt. 1, p. 21).

[15] *Ibid.*, 25.

[16] *Pacific Railroad Reports*, III, pt. 1, p. 25.

[17] *Ibid.*, 28.

Mexican captives;[18] these and negro slaves did most of the labor for the more wealthy Indians. The local name among the Kioways for the Red River was "Rio Palo Duro," for the Washita, "Rio Negro," and for the Canadian, "Rio Colorado."[19]

At Morale Creek the party turned south from the river once more, and ascended one portion of the Llano Estacado, and found a good route leading south to White Sandy Creek. This was the region of the Teguas. Pueblo Indians, coming to trade with the Comanches,[20] were also met. Continuing by way of Halt and Fossil creeks the valley of the Tucumcari was crossed. In the valley Whipple met a party of Mexicans with flour, hard bread, and tobacco, who were waiting to meet the Kioways and Comanches on their return from the buffalo hunt.

From Tucumcari Creek the survey passed by way of Arroyo de Pajarito along the ridge separating the waters of the Canadian from those of the Pecos, to Anton Chico on the latter stream. Although this town had a population of five hundred inhabitants, few had traversed the road to Albuquerque; so Whipple could gain little information upon that section.[21]

After reconnaissances in the neighborhood of Anton Chico it was decided that two distinct surveys should be made to the Rio Grande.[22] The party was divided, and the main train was to proceed direct to Albuquerque. Whipple led the second party north to La Cuesta by way of Cañon Blanco. Finding that this section

[18] *Ibid.*, 31. The Kioways were described as a "wild-looking set." "Cunning, duplicity, and treachery, seemed stamped upon every lineament of their features."

[19] *Pacific Railroad Reports*, III, pt. 1, p. 33. This confusion of names was doubtless one cause of the mistake of Baron von Humboldt and Colonel Long in taking the headwaters of the Canadian for the source of the Red River.

[20] *Ibid.*, 34. Flour and bread were offered for the buffalo robes and horses of the Comanches.

[21] *Ibid.*, 41.

[22] *Pacific Railroad Reports*, III, pt. 1, p. 42.

had been already well marked by Simpson and Abert,[23] he turned back and rejoined the main party at Lagunas, which lay in a depression of the summit dividing the waters of the Rio Grande from those of the Pecos. A second division was then made: one party to continue direct to Albuquerque, the other, under Whipple, to examine northwest to Galisteo. The latter party, after passing through Galisteo, followed the usual wagon road to Santa Fé as far as Los Cerritos. The route then led into Ciénega, or Cieneguilla, and there a "Camino Real" was struck, which Whipple followed to Peña Blanca on the Rio Grande. Here he turned south passing through the Indian pueblos of San Domingo (at the mouth of Rio Galisteo), Bernalillo, and Zandia to Albuquerque. The Indians were everywhere friendly and were anxious to sell their poultry and fruit to the Americans.[24]

At Albuquerque Whipple found his advance party already arrived. It had followed the route by San Pedro Pass, San Lorenzo, and San Antonio to the Rio Grande. Whipple's first concern upon arriving was to procure information about the country lying to the west. He had in his possession a tracing from Captain Sitgreaves' map of a reconnaissance to the Rio Colorado in 1851,[25] and he consulted with such white persons as were known to have visited the region near the proposed line of exploration. Among these were Mr. Thomas, who drew for him a sketch from memory of Walker's route of 1851; Mr. Tully, a companion of Mr. Aubrey in a recent trip from California; and Saavedra and Antoine Leroux,[26] who were familiar with the

[23] The examinations of Lieutenant J. M. Abert were made in 1846–47. See his report of a reconnaissance from Fort Leavenworth to Santa Fé, in *S. Ex. Docs.*, 30 Cong., 1 sess., IV (508), no. 23.

[24] The entire valley of the Rio Grande yielded good crops; but between Bernalillo and Albuquerque were the finest *ranchos* and vineyards to be found in the Territory (*Pacific Railroad Reports*, III, pt. 1, p. 47).

[25] For full report of Sitgreaves, see *S. Ex. Docs.*, 32 Cong., 2 sess., X (668), no. 59.

[26] Leroux had served as guide for Sitgreaves.

Moqui and Mohave country. The two latter were secured as guides for the remainder of the expedition. As no one had yet traveled the entire route designated in his instructions, Whipple believed that a practicable line could be run by avoiding the difficulties encountered by his predecessors.[27]

From Albuquerque reconnaissances were made to San Antonio by way of Carmel Pass,[28] to the summit of the Zandia Mountains and to the gold mines of the Galisteo Valley and thence to Santa Fé. Whipple, himself, made an examination to Isleta, thirteen miles south of Albuquerque, in search of a favorable place to bridge the river. Two jutting bluffs there presented ideal abutments for bridging, and Whipple, crossing the river at the usual Isleta ford, continued down the right bank to Las Lunas, a military station. As it seemed favorable to cross into the valley of the Rio Puerco from that direction, Whipple determined upon that plan of future operations.[29]

From Albuquerque to Los Angeles.—On November 8, Whipple organized his party in two divisions. Lieutenant Ives, who had reached Albuquerque on October 6, and had meanwhile been taking observations in the vicinity, was dispatched by way of Isleta to bring that point in the line of the survey, after which he was to continue west and determine whether he could cross the valley of the Rio Puerco in that direction.[30] Whipple, with the main train, crossed the river at Albuquerque to Atrisco in order to examine the country near the direct western route to Zuñi and to unite with the main survey on the Rio San José, a branch of the Puerco. The second day from Albuquerque, his party left

[27] *Pacific Railroad Reports,* III, pt. 1, p. 48.

[28] Of the two practicable passes of the Rocky Mountains examined by Whipple, the one by way of Galisteo and the pueblo of San Felipe was deemed more economical and practicable than that by Carmel Cañon, and Isleta (*ibid.,* 58). The Atchison, Topeka and Santa Fé follows the former in general.

[29] *Pacific Railroad Reports,* III, pt. 1, p. 53.

[30] *Ibid.,* 57.

the valley of the Rio Grande, and entered a ravine leading gently to the Puerco. The route from San Felipe was deemed favorable for railroad construction.[31] Whipple descended the Puerco Valley, passing by "El Alamo," or Sheeps Springs, and then followed the edge of the valley of the San José to the deserted Mexican town of Rita. There he met Ives, and after reconnoitering in the vicinity, the entire party advanced up the valley to Laguna.[32] From Laguna, the survey advanced to Covero, situated in a lateral valley; but a reconnaissance meanwhile continued up the San José River to the point where the Zuñi road crossed it. Covero (modern Cubero) was situated near the foot of the volcanic Mount Taylor; being a frontier Mexican settlement, it had suffered seriously from the incursions of the Navajoes.[33] From this village the survey continued west to Hay Camp in the San José Valley. There the road divided, one, the Camino del Obispo, leading to Zuñi, and the other, a new route, northwest to Fort Defiance. Between the two was found a trail ascending the river to Ojo del Gallo and thence across the mountains to Zuñi.[34] Whipple divided his party, sending Campbell, the chief surveyor, to examine the northern route, while the main survey continued direct to Zuñi. Lieutenant Jones, in command of the escort, was sent to Fort Defiance to procure additional soldiers for the most dangerous portion of the route west of Zuñi. Whipple, with the main party, began the gradual ascent of the Sierra Madre, reaching the summit at Agua Fria,

[31] *Pacific Railroad Reports*, III, pt. 1, p. 58.

[32] One of the old Indian Pueblos, little changed from the condition in which it was found by the Spaniards in the 16th century. Whipple gives an interesting account of the peculiar customs and civilization of the inhabitants (*ibid.*, 54).

[33] *Ibid.*, 61. In times of peace, however, the inhabitants profited greatly from trade with the Navajo Indians. The Pueblo Indians were the agriculturists of the San José Valley.

[34] *Pacific Railroad Reports*, III, pt. 1, p. 62. Whipple remarks that this trail was noticed by Captain Simpson in his report of Colonel Washington's Navajo expedition.

a permanent watering place, seven thousand seven hundred and sixty feet above sea level. The descent on the west was by means of a wide valley, and here was noticed a prominent landmark, El Moro, called by Simpson Inscription Rock. Upon this rock were seen the many Indian hieroglyphics so accurately described by Simpson in 1849. On a second rock were found inscriptions made by the Spaniards as early as 1620 recording their journey to and from Zuñi.[35]

From El Moro the survey proceeded to the valley of Ojo Pescado, in which were seen the ruins of ancient pueblos. Whipple ventures the conjecture that these were the "Seven Cities of Cibola";[36] a thorough search failed, however, to reveal any corroborating evidence. The Rio Pescado was soon lost to sight for eight miles, reappearing as the Rio de Zuñi, and increased by the Rio Nutria from the north. A temporary camp was placed in this valley beneath the old Zuñi ruins and within sight of Zuñi. While awaiting there the return of Jones and Campbell, various scientific expeditions were made and reconnaissances sent out in search of permanent watering places. Whipple received a ceremonious visit from the governor of Zuñi and in turn called upon the cacique of the pueblo.[37]

On November 24, Jones and Campbell arrived in the Zuñi Valley, having completed their reconnaissances through the northern passes of the Sierra Madre to Fort Defiance. They reported a route from Ojo de Gallo by way of Ojo Azul to Ojo del Oso whence it would connect with the valley of the Rio Puerco of

[35] The comparison of the distinctness of the two sets of hieroglyphics as determining the age of Zuñi civilization is an interesting anthropological study, but not within the scope of this thesis.

[36] *Pacific Railroad Reports*, III, pt. 1, p. 65.

[37] Whipple's observations upon the traditions of the Zuñi Indians, their religious rites, etc., must be of interest to every student of anthropology. His Indian Report, in *Pacific Railroad Reports*, III, pt. 3, demonstrates the zeal with which he recorded all available information upon every tribe with which he came in contact.

the West.[38] The main party advanced to Zuñi, while Whipple and two companions with much difficulty ascended old Zuñi, finding there relics of the ancient occupation. From Zuñi the route led north to Arch Spring, by which it was hoped to reach Colorado Chiquito; this line was not practicable, however, so Whipple turned back and pursued a westerly direction from Zuñi. Two messengers were dispatched to the Moqui nations asking that they meet the survey at the Colorado, and be prepared to furnish guides. Whipple now entered a region over which it was supposed no white man had passed,[39] his route lying west along the thirty-fifth parallel to the valley of the Rio Puerco of the West. After crossing the river the survey kept to the mesa to the north, crossing Carrizo Creek (or wash) and Lithodendron Creek and emerging on the large valley of Colorado Chiquito north of the mouth of the Puerco.

For several days following, the route continued along the valley of the Colorado Chiquito. Soon after crossing Cottonwood Fork the main river broke into many channels and made a large bend to the north. Whipple believed that he could cut off the bend by going due west to the San Francisco Mountains, and a reconnoitering party was sent out to secure definite information. This reconnaissance pursued a course west to a large deep valley coming from the southeast, which was called Cañon Diablo. Being unable to cross to the San Francisco Mountains, the party followed the cañon to the Colorado, and there was joined by the main party which was following the river.

Whipple himself then headed a reconnaissance west toward the San Francisco Mountains, over a volcanic country but with

[38] This is the route of the Atchison, Topeka and Santa Fé across the Zuñi or Sierra Madre Mountains by way of Campbell's Pass (named for the leader of this reconnaissance). Whipple recommended this route as the most practicable from Rio Puerco of the West to Albuquerque (*Pacific Railroad Reports*, III, pt. 1, p. 74).

[39] *Ibid.*, 72.

a regular grade.[40] On December 17 he crossed the dividing ridge at the base of the San Francisco Mountains, separating the waters of the Colorado from those of the Gila. It was evident that from this point the country to the south presented better facilities for railroad construction.[41] At the southwestern point of the mountain base, at a watering placed named by Whipple Leroux's Spring, his line connected with the survey run two years previous by Captain Sitgreaves. The route of the latter, however, had led around the north and western base of the mountain from Colorado Chiquito.[42] On his return to the Colorado, Whipple followed a more southern route, crossing the Rio Verde,[43] a tributary to the Gila, and passing by and naming Cosnino Caves (after the tribe that roamed that region).

Whipple then conducted his entire party to Leroux's Spring by way of the caves. He determined there to follow Bill William's Fork, which Sitgreaves had represented as rising near the Springs and flowing west southwest to the Rio Colorado.[44] But reconnaissances to the west and southwest failed to reveal this stream. One party proceeded directly west to New Year's Spring (named from the day upon which it was discovered), and then southwest to Bill William's Mountain. Here Whipple once more struck the trail of Sitgreaves, who had passed around the southern base of this mountain and thence proceeded west northwest to Yampais Creek.[45] This reconnaissance of one

[40] *Pacific Railroad Reports*, III, pt. 1, p. 79.

[41] *Ibid.* The Atchison, Topeka, and Santa Fé follows the more southerly route as suggested by Whipple.

[42] Sitgreaves, *Report of an Expedition Down the Zuni and Colorado Rivers*, map. San Francisco Mountain was shown on the old Spanish maps and was long thought continuous to the Mogollon chain. Whipple found that they were far separated.

[43] The naming of this river caused much confusion to government explorers. The Spanish and Mexican appellation had been Rio Verde, but on Sitgreaves's map it appears as San Francisco River. As there was another affluent of the Gila known as San Francisco River the confusion was natural.

[44] *Pacific Railroad Reports*, III, pt. 1, p. 83.

[45] Sitgreaves, *op. cit.*, map.

hundred and thirty miles made known the region about the modern city of Williams (the junction of the Grand Cañon Railway with the Atchison, Topeka, and Santa Fé).

On January 8, the entire party advanced from New Year's Spring, west to Partridge Creek and then southwest to the base of Picacho Butte. The Aztec Mountains there presented a formidable barrier and a four days' reconnaissance to the north failed to reveal a practicable opening.[46] Whipple then moved his party to Valle de Chino while he conducted a reconnaissance southwest to Pueblo Creek. He discovered there a practicable opening and soon led the main train through the defile which he called Aztec Pass. After crossing Muddy Creek, an affluent of Bill Williams Fork, the route led north of Gemini Peaks toward the Aquarius Range, which gets its name from the numerous streams flowing from it.[47] Reconnaissances showed that this range could be crossed by Cactus Pass (named by Whipple) to White Cliff Creek. This region proved to be inhabited by the wild Yampais tribe;[48] the Cosninos roamed farther to the north; and the Tontos near the Gila.

With reconnaissances in advance Whipple pushed southwest to Big Sandy Arroyo, and then south along this depression to Bill William's Fork (the Muddy Creek, above mentioned, issuing from Aztec Pass). The survey then continued down the valley of the Fork, often encountering difficulties owing to the narrowness of the cañon, and on February 7 was opposite the mouth of the Rio Santa María.[49] As Whipple followed the river valley he sent out explorers to examine in front and to the west through lateral valleys. The narrowness of the cañon made travel for

[46] *Pacific Railroad Reports*, III, pt. 1, p. 90.

[47] *Pacific Railroad Reports*, III, pt. 1, p. 95.

[48] For an interesting account of this tribe see *ibid.*, 97–98.

[49] Whipple asserts that the name Santa María was applied by the Spanish map makers to the main stream; and that he first applied it to the affluent. His appellation has persevered.

the main train difficult and he was forced to abandon several of his wagons.

On February 20 the long sought Colorado was reached at the junction of Bill William's Fork. The fork at the junction was about twenty-five feet wide, while the Colorado was two hundred and fifty yards across. The survey then proceeded up the valley of the latter stream following a well-beaten Indian trail. The immediate country was thoroughly examined by side expeditions and found to be very rough, and Whipple was forced to abandon the remainder of his wagons.[50] The first Indian tribes to be met with on this portion of the route were the Mojaves; the next a Chemehuevis band of Pai-Utes.[51] The latter were very anxious to describe the country ahead, drawing maps and locating other Pai-Ute tribes, and guiding the party along the difficult trail. On February 25, Whipple was forced to detour far to the east to avoid a sharp spur of the mountains (The Needles). Upon approaching the river once more,[52] he was met by a great band of Mojave Indians who desired to trade and smoke the pipe of peace. These Indians were yet in a wild state because of lack of contact with civilization; shell beads or "pook" were used as a substitute for money.[53] One Mojave exhibited a bronze medal, believed by Whipple to have been stolen from the Mission San Pablo erected at Yuma in 1780 and destroyed the following year.

Whipple was able to procure a competent guide, one Francisco, a chief of the tribe, and then ascended "the magnificent valley of the Mojaves." The soil was very rich and was

[50] *Pacific Railroad Reports*, III, pt. 1, p. 110.

[51] According to Whipple (*ibid.*, 111, note) in old Spanish manuscripts this name was spelled "Payuches," which also answered to the Indian pronunciation. Moderns have corrupted it into "Pah-Utahs."

[52] The Atchison, Topeka and Santa Fé crosses the Colorado just above The Needles, and, turning north by way of Kingman, strikes the route surveyed by Whipple near Picacho Buttes.

[53] For a detailed discussion of their characteristics, traditions, customs, etc., see *Pacific Railroad Reports*, III, pt. 1, pp. 113–115; pt. 3 (Report upon Indian Tribes), pp. 33–34.

well cultivated by the Indians, as was evidenced by the many *rancherías* and granaries to be seen. Ten miles beyond the Mojave village preparations were made to cross the Colorado, which was there five hundred yards wide and of a strong current. Much difficulty was experienced, although valuable service was rendered by the Mojaves with their light rush rafts.[54] The survey then continued northwest, attended by a large number of Mojaves. In council they had decided to furnish guides for the route across the territory traveled by the Pai-Utes, as they very much wished to have the country opened up to travel and trade.[55] One "Cai-Rook" was selected to conduct the party to the junction of the Mojave River and the Mormon road. The departure of the white men from the river was announced by signal fires extending to the distant Yampais.

From the Colorado an old footpath led due west into the sandy bed of a dry stream supposed to be the Mojave River.[56] On account of the rumored scarcity of water ahead, the party was divided into three sections, to follow each other successively. The route first lay northwest to Marl Spring and then turned south and southwest. The marches west of the Colorado were forced, owing to the scarcity of water and sustenance; but, nevertheless, Whipple and his party opened up what he considered to be the best emigrant road across the desert.[57] After crossing the dry bed of an immense salt lake, he continued west twelve miles to the Mojave, "a beautiful stream of fresh water, from ten to twenty feet wide and a foot deep," at a place where it issued from the sand.[58]

[54] This crossing must have been made near the modern city of Needles.

[55] *Pacific Railroad Reports*, III, pt. 1, p. 119.

[56] *Pacific Railroad Reports*, III, pt. 1, p. 120.

[57] *Ibid.*, 123.

[58] Whipple believed that the valley of the Mojave was continuous to the Colorado. He had been unable to make a thorough examination and so urged additional surveys with the possibility of opening a more direct route.

Following, in general, the Mojave Valley, the route continued south of west, and soon struck a recent trail, believed to have been made by the Williamson party.[59] A multitude of Mojave and Pai-Ute Indians were in constant attendance and in numerous councils expressed the desire to come under the protection and civilization of the government. They were profuse in assertions of friendship to the Americans, but were hostile to the Mexicans. On one occasion, a band of Pai-Utes killed a Mexican trader and confiscated his property before Whipple could interfere and he was unsuccessful in bringing them to justice.

On March 13 the Mormon road was reached, and Whipple followed its course along the right bank of the Mojave. After two days the survey had advanced to the bend of the river where the road to Cajon Pass separated from the valley. Whipple determined to follow this route as lack of provisions precluded the examination of the passes of the Sierras to the north which his instructions had ordered him to make.[60] He therefore began the gradual ascent of the Cajon and thence descended into a valley on the west, sparsely inhabited by Mormons. There Whipple learned that Williamson and Stoneman had successfully examined every pass south of Walker's,[61] and, knowing that every pass leading into the Tulare Valley was accessible from the Mojave River, Whipple decided to disband his party and proceed at once to Los Angeles. Leaving the main road, which turned south to San Bernardino and the military post at Jarupa, Whipple turned west along the base of the mountains by way of the ranches of Cucamonga and Chino to the town of El Monte on the San Gabriel River. Thence the route led by the old Mission San Gabriel to Los Angeles, a town of about three thousand inhabitants at that time, and being rapidly settled by

[59] Williamson was conducting a survey in California for practicable railroad routes. See below Chapter VIII.

[60] *Pacific Railroad Reports*, III, pt. 1, p. 129.

[61] See below Chapter VIII.

Americans. Here his actual operations ended, and he proceeded by boat to San Francisco where his report was compiled.

Results of the Whipple Expedition.—The thirty-fifth parallel route as surveyed by Whipple between Fort Smith and San Francisco by way of Tah-ee-chay-pah Pass was one thousand nine hundred fifty-two miles in length.[62] He had examined the greater portion of the route now followed by the Atchison, Topeka and Santa Fé Railroad. The railroad line from Cajon Pass to Isleta on the Rio Grande is identical with the route as advocated by Whipple. He demonstrated that this route was not only practicable but in many respects eminently advantageous. The first six hundred and fifty miles from the eastern border of the Choctaw territory to the Pecos River possessed, in the valley of the Canadian, a natural highway, superior in advantages to any other between the same degrees of longitude.[63] The route followed by him between the Rio Grande and the Colorado, had, for the most part, never before been traversed. It had the disadvantage of being intersected by several mountain chains; but through them Whipple had discovered passes which rendered the route practicable, if not easy. And from the Colorado along the Mojave River no obstacle existed to the construction of a railroad.

Aside from the fact that Whipple marked out a practicable railroad route, he added much to the knowledge of the West by exploring new territory, giving names to rivers, mountains, and passes, and classifying and systematizing all preëxisting information concerning the thirty-fifth parallel region.

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[62] His estimates for the section between Taheechaypay Pass and San Francisco were taken from Williamson's report.

[63] *Pacific Railroad Reports*, III, pt. 1, p. 132; pt. 2, pp. 9–16.

CHAPTER VII

EXPLORATIONS FOR A THIRTY-SECOND PARALLEL ROUTE

Parke's Explorations from the Pima Villages to the Rio Grande.—The Secretary of War was late in ordering surveys to be made of the most southern route, for the reason that previous explorations had contributed a vast amount of information upon it and more reconnaissances would be needed. Lieutenant Parke, who had been the assistant of Lieutenant Williamson in exploring the passes of the Sierra Nevada, led the first party that was sent into the field. His instructions, issued on November 18, 1853, were received at San Diego on December 20, 1853. According to them Parke was to explore from the Pima villages on the Gila to the Rio Grande, with a party and equipment remaining from the Whipple and Williamson expeditions.[1] The Mexican government had recently granted to the United States permission to run a line through the northern part of the country; hence, his detailed instructions ordered him to proceed from the Pima villages, at the mouth of the Rio Santa Cruz, to Tucson, thence by Nugent's wagon trail to its San Pedro crossing. The region between the crossing and the Ciénega de Sauz had been surveyed by the Mexican Boundary Commission, but Parke was, nevertheless, to continue his line as far east as Cooke's wagon road and thence to proceed by the shortest and best route to the Rio Grande at some point between Doña Ana and Frontera.[2]

[1] Secretary of War Davis to Parke, November 18, 1853, in *Pacific Railroad Reports*, II, pt. 5 (Parke's report upon the route near the 32nd parallel), p. 3.

[2] *Pacific Railroad Reports*, II, pt. 5 (Parke's report upon the route near the 32nd parallel), 3–4.

Parke, having organized his party of fifty-six persons, including an escort of twenty-eight, set out from San Diego on January 24, 1854.[3] He followed the well worn southern emigrant road to Fort Yuma, at the junction of the Gila and Colorado. From Yuma he pushed rapidly ahead to the Pima villages, this portion of the route having been previously examined by Emory. On February 13 the first of the Pima and Maricopa villages,[4] three hundred and ninety miles from San Diego, was reached. A few miles beyond Beckwith left the river and turned southeast to Tucson,[5] reaching there on the twentieth.

Parke, after presenting his passport to the *comandante* of the presidio, continued his survey southeast to the Ciénega de los Pimas, a tributary of the Rio Santa Cruz. Once more traveling on the emigrant road he crossed the divide into the San Pedro Valley, and then, breaking a new trail, entered the Playa de los Pimas. Beyond the Playa lay the Chiricahui Mountains, with the lofty Dos Cabezas, and toward this landmark Parke directed his survey. Being unable to find water near Dos Cabezas, he turned south and entered Puerto del Dado, where a spring was found. Upon crossing the divide of the Chiricahui, he entered the valley of the Ciénega de Sauz[6] and encountered another ridge, the Peloncillo Range. It was learned from an Apache family (this region was much frequented by that tribe) that there were but two passes through this ridge, one which had been traversed by the Boundary Commission and Gavilan Pass. Parke thoroughly examined both, but crossed by the latter into

[3] *Ibid.*, 4–24, for full report and itinerary.

[4] "Their chiefs and old men were all eloquent in professions of friendship for the Americans, and were equally desirous that we should read the certificates of good offices rendered various parties while passing through their country" (*ibid.*, 5).

[5] "A one-storied, flat-roofed adobe town of about six hundred inhabitants, whose sole pursuit is agriculture; the much dreaded Apaches having interfered greatly with their pastoral occupation" (*ibid.*, 7).

[6] The Rio de Sauz of southwest New Mexico.

the Valle de las Playas. Continuing east, and turning a point in the Pyramid Range near Pyramid Peak, he reached Cooke's emigrant road,[7] near Las Peñasquitas. Parke determined to follow this trail into Mesilla and not go direct to the Rio Grande, as his instructions indicated.

Upon reaching Ojo de la Vaca a reconnoitering expedition was sent fifteen miles north to Fort Webster to procure information of the country south of the boundary line and east to the Rio Grande. But this party, rejoining the main train at the Rio de los Mimbres, reported that the fort had been recently sacked and burned by the Indians.[8]

From Cooke's Springs, east of the Mimbres, the route lay across open plains to the Mesilla Valley and the Rio Grande at Fort Fillmore. Although this route had been found entirely practicable for a railroad, Parke determined to return to Cooke's Springs and survey a more southerly line to the Rio Grande. He discovered during this reconnaissance a practicable pass between the Picacho de los Mimbres and the Sierra Florida, affording a fine route to Fort Fillmore.[9]

Parke had intended continuing his survey across northern Texas, but upon reaching Fort Fillmore found that his appropriation was too small to accomplish the design. Moreover, Captain Pope had but a few days previously set out from Doña Ana (above the fort) for this very purpose. Accordingly, Parke deemed it best to close the work, discharge the party, and depart for Washington by way of San Antonio and Indianola, Texas.[10]

Parke, in his twenty-seven days of exploration from the Pima villages, had marked out a route three hundred and seventy-three

[7] Cooke's route was a well-traversed road and was, at that time, the only route through that region used by southern emigration to California. *Pacific Railroad Reports*, II, pt. 5 (Parke's report upon the route near the 32nd parallel), 12.

[8] *Ibid.*, 13.

[9] *Ibid.*, 14–15.

[10] *Ibid.*, 15.

miles in length, entirely favorable for railroad construction. The distance was short and the mountains offered but slight opposition. The greatest drawback was the scarcity of water, there being but nine sources of supply along the entire route: the first was at Tucson, the next at Ciénega de los Pimas, the third at the crossing of Rio San Pedro, the fourth a spring in Puerto del Dado, the fifth in Valle de Sauz, the next near Pyramid Peak, the seventh the Ojo de la Vaca, the eighth the Rio Mimbres, and the last source, before reaching the Rio Grande, was at Cooke's Springs.[11]

Parke's Reconnaissance during 1855.—After Parke had concluded his explorations in California for a railroad route between San Francisco and Los Angeles, he determined to conduct a small party over the region examined in the previous year, 1854.[12] Accordingly, he proceeded to Yuma Junction and then followed the usual route, marked out by Kearney and Emory, to the Pima villages. There his detailed operations for 1855 commenced.[13] His party was divided; one portion under Mr. Campbell, who had been chief surveyor of the Whipple expedition, with the wagons, followed the usual emigrant road (Cooke's) to Tucson and thence continued to the crossing of the San Pedro River near Quercus Cañon and Nugent's Pass. Lieutenant Parke with the pack train followed the Gila to the mouth of the San Pedro and then turned up the valley of the latter to the wagon road and his trail of the previous year. The parties being reunited, explorations were made of the various passes (among which were Nugent's Pass and Quercus Cañon)

[11] Parke to Secretary of War Davis, August 22, 1854, *ibid.*, 18.

[12] The practicability of constructing a road through this section had been demonstrated during Parke's examinations of February and March, 1854. But owing to the limited means at his disposal that survey was necessarily partial and hurried. He has, however, indicated lines for further explorations, which would, he believed, solve the one problem of the route —lack of water.

[13] See *Pacific Railroad Reports*, VII, pt. 1, no. 2 (Parke's report of the explorations from the Pima villages to the Rio Grande), pp. 19–28.

leading through the mountains bordering the San Pedro and separating it from the Playa de los Pimas. The command then proceeded east to the Playa de los Pimas,[14] and divided once more on the northwestern border. The main train proceeded through the Chiricahui Mountains by the Puerto del Dado; Lieutenant Parke with a small party and two wagons made a reconnaissance around the northern end of the range and south of Mount Graham, discovering an easy and practicable railroad route. United once more in the Valle de Sauz the party crossed the Peloncillo Range near a peak of the same name and entered the Valle de las Playas on the route marked out by the Boundary Commission. The survey then proceeded around the northern end of the Pyramid Range and across a second playa to the southern slopes of the Burro Mountains. There Parke was once more upon the southern emigrant road (Cooke's), and, following it, he entered the arroyo, leading from the Ojo de Inez, and established a camp at Las Peñasquitas. His tours led thence by the Ojo de la Vaca and the Picacho de los Mimbres to Cooke's Spring. Lateral examinations were made on either side, particularly to the lower lands south of the route, where a more favorable railroad line was marked. From Cooke's Springs Parke followed the usual wagon road to Fort Fillmore, diverging however, near the edge of the mesa and descending to the river bottom by a smooth and easy slope, thus avoiding the rough cañon previously encountered north of El Picacho.

At Fort Fillmore the field operations of Parke's survey terminated. His examinations had been most satisfactory; the observations made during 1854 and 1855 proved conclusively the practicability of his route for railroad construction.[15]

[14] Described as "hard and smooth, and apparently as level as a frozen lake. In fact, the effect in crossing, except in point of temperature, was very analogous to that experienced in crossing a broad, smooth field of ice" (*ibid.*, 24).

[15] *Ibid.*, 4; 19.

Pope's Survey from the Rio Grande to the Red River.[16]—Captain John Pope was instructed by the War Department to continue the route of the thirty-second parallel from Doña Ana on the Rio Grande to the Red River, giving his particular attention to the military benefits to be derived from railroad construction.[17]

His party was organized at Albuquerque in New Mexico and then repaired to Doña Ana by a land route, reaching there on January 16, 1854. At the latter place a delay of four weeks was experienced because of a misunderstanding in regard to the furnishing of transportation; but while waiting, Pope added to the general knowledge of the region by an accurate survey of the Mesilla Valley.

On February 12 the party consisting of seventy-five persons, including an escort of twenty-five, set out from Doña Ana into an unknown country, with no guide and with no information of the route ahead.[18] After crossing the first ridge to the east, Pope decided to run the line to El Paso, while the main party continued southeast to the Hueco Mountains. The progress of the latter was slow, because of the great scarcity of wood and water. After Pope had rejoined his party he continued the survey through Hueco Pass and by way of Cerro Alto to Los Cornudos, a spur of the Sierra de los Alamos. From this point the route turned southeast on a good road but "without sign of wood, water or living animals." After passing by the Ojo del Cuervo (two salt lakes) the gradual ascent of the Guadalupe Mountains was begun; the party felt in continual danger of attacks from the Indians, and kept careful guard. After descending on the

[16] His report forms part of Vol. II of *Pacific Railroad Reports*, and includes reports on Indian tribes, natural history, geology, etc. The diary of the expedition was kept by J. H. Byrne, assistant computer.

[17] Secretary of War Davis to Pope, *S. Ex. Docs.*, 33 Cong., 1 sess., I, pt. 2 (711), pp. 64–65.

[18] *Pacific Railroad Reports*, II, pt. 4 (Pope's report upon the portion of the route near the 32nd parallel), p. 52.

eastern slope, the survey was advanced to Delaware Creek. From this point, Pope sent a small party back to search for a pass south of the Guadalupe Range which would make the route to El Paso more direct. Captain Marcy[19] and Colonel Grey had mentioned such an opening, but Pope's party was unable to find it.

The survey continued from the crossing of the Delaware Creek down the left bank of the stream to the Pecos, meanwhile examining the country by reconnaissances. On reaching the Pecos the party was confronted by the most dangerous portion of the route, the Llano Estacado, the "terra incognita" of western Texas.[20] Pope deemed it impracticable to examine this dreadful desert with his entire party; accordingly, he detailed Captain Taplin, with an escort of ten men, to "examine the 'Llano Estacado,' from this point to the waters of the Colorado or Brazos River, on a line 20° east of north, noting particularly the practicability of the country for wagons, and the intervals, as exactly as possible, between the permanent watering places."[21] A second reconnoitering expedition was sent back, on March 10, to the Guadalupe Mountains to search for a more practicable pass south of the one traversed by Pope, and also to examine the valley of the Salt Lakes, following it to the Pecos.[22] After a four days' journey this party returned; the country for forty miles south of the Guadalupe Mountains had been examined but no better pass found.[23]

On March 15 a third reconnoitering expedition was sent out under Lieutenant Marshall, to examine the Pecos River north to

[19] Report of Captain R. B. Marcy's Route from Fort Smith to Santa Fé in *S. Ex. Docs.*, 31 Cong., 1 sess., XIV (562), no. 64, p. 202.

[20] The Llano Estacado derives its name from a tradition that, in early times, the Spaniards had staked a road on it from San Antonio in Texas, to Santa Fé in New Mexico.

[21] Pope to Taplin, March 9, 1854, in *Pacific Railroad Reports*, II, pt. 4 (Pope's report upon the portion of the route near the 32nd parallel), p. 60.

[22] Pope to Lieutenant Garnard, March 9, 1854, in *ibid.*, 61–62.

[23] Garrard to Pope, Mar. 1, 1854, in *ibid.*, 63.

the Sacramento, which was believed to be within seventy miles of Delaware Creek.[24] Marshall proceeded a two days' journey up the Gila, and reached a stream coming from the northwest. He examined the creek for a distance, but finding it impracticable for a railroad, returned to the main camp.[25]

While in camp on Delaware Creek Pope had an exciting adventure with the Apaches. The Indians set fire to the prairie, designing no doubt to destroy the party; and it was only by rapid back-firing and a retreat across the Pecos that the expedition was saved. The reconnoitering expeditions, however, met numerous bands of Apaches and they invariably asserted their friendship for the Americans.[26]

On March 18 Pope received word from Taplin, who was then 142 miles east of the Pecos, that it would be impossible to cross the Llano Estacado with wagons, adding that he had been forced to abandon his on the fourth day out. Pope, thereupon, decided not to attempt a direct route, but to move south to the emigrant trail, following the Pecos. After crossing the river on the emigrant road his route lay northeast. The country was rolling prairie broken by numerous sand hills. Water was scarce and the men and animals often suffered from lack of it. Upon reaching the Big Springs of the Colorado, Pope departed from the emigrant road, and pursued a southwesterly direction, making his own trail. His objective point was Sulphur Springs, the first large water reached by Captain Taplin in his journey across the Llano Estacado.[27]

While delaying at the Springs Captain Taplin made a full report[28] of his explorations. He had departed from the Pecos

[24] Pope to Marshall, Mar. 14, 1854, in *ibid.*, 64.

[25] The "creek" examined was undoubtedly Rio Penasco.

[26] Marshall to Pope, Mar. 17, 1854, in *Pacific Railroad Reports*, II, pt. 4 (Pope's report upon a route near the 32nd parallel), p. 65.

[27] Taplin to Pope, Mar. 15, 1854, *ibid.*, 75.

[28] A preliminary report had been sent by Taplin to Pope at the mouth of Delaware Creek, March 18, 1854. His final report was made at Sulphur Springs, April 2, 1854.

on March 9, and directed his course northeast, over rolling prairies cut up with ravines and dotted with sand hills. Four days out he was forced to abandon his wagons, and after one hundred and fifty miles of travel, made difficult by the sand and lack of water, he reached Sulphur Springs. From there he sent his express to Pope on the Pecos, and also had his wagons brought up. He waited several days for the main party to arrive, and then set out on a reconnaissance of the plains to the east and southeast. While near the Big Springs of the Colorado he was threatened by a band of Kioways. This particular band was returning north from a plundering expedition into Mexico, and was driving its horses, colts, and mares with them.[29]

The Sulphur Springs were on the main Kioway trail which struck the Pecos at Horsehead Crossing and then continued north by Mustang Springs and Sulphur Springs to the head of the Brazos. The trail was very broad and deep, and was evidently in constant use by the Indians in their forays into Mexico.[30]

Pope, while delaying at the Springs, despatched Garrard, with nine days' rations, to survey and take the levels of the Llano Estacado from the Falls of the Pecos to the Springs. Garrard accomplished the design in eight days, computing the distance at 125.1 miles. Thus two parties had overcome the horrors of the Llano Estacado and secured a thorough and practical knowledge of its formation.

After thoroughly reconnoitering the plains in the vicinity of Sulphur Springs, Pope decided to pursue a direct course northeast to Preston on the Red River. On the fourth day out, after crossing the main Colorado, Pope's party was frightened by a band of Comanches. They proved to be friendly, however,

[29] Taplin to Pope, April 2, 1854, in *Pacific Railroad Reports*, II, pt. 4 (Pope's report upon a route near the 32nd parallel), 77.

[30] *Pacific Railroad Reports*, II, pt. 4 (Pope's report upon a route near the 32nd parallel), 78.

approaching with a white flag.[31] From the Colorado crossing, a small party was sent south to Fort Chadbourne, located on Oak Creek, an affluent of the Colorado, to procure provisions, and with orders to rejoin the main train on the Brazos. The main party under Pope crossed the dividing ridge to the headwaters of the Brazos, and after fording several affluents of the main stream reached a well traveled road trending north and south. This road was supposed to connect Marcy's trail (which lay south of Pope's route) with the towns in northern Texas. It traversed a country described as rich, fertile, and fine in every respect;[32] timber was plentiful and water abundant.

Following this road Pope arrived at the Clear Fork of the Brazos, and there awaited the arrival of the reconnaissance from Fort Chadbourne. Then, as he continued east, he struck the military road which connected Preston, Forts Belknap and Chadbourne, Phantom Hill and San Antonio. Here was seen the first house on the long journey from Doña Ana, and it was indeed a welcome sight. The owner of the place, an Indian agent, Colonel Stern, had been murdered two months before by two Wichitas, who in turn were seized and killed by Comanches friendly to the whites.

Pope continued his line of survey along the military road, stopping at Fort Belknap to procure provisions, and then passing into the valley of the Trinity. Affluents of the Trinity and of the Red rivers were in close proximity in this section of Texas; the country being open and fertile but sparsely settled. From Gainesville[33] the route led through the Lower Cross Timbers of

[31] They were led by a "most outré looking figure. This was Sanchoz, one of their chiefs, dressed in an infantry captain's uniform coat, silver epaulets, red sash tied over his shoulder, non-descript pantaloons, and moccasins; add to them a military cap with an enormous red pompon, and some idea may be formed of an exhibition at once ridiculous and humiliating" (*ibid.*, 81).

[32] *Ibid.*, 83.

[33] "The nucleus of a flouishing and important city. It consists of about fifteen houses; has two groceries, with their inseparable companion, a court house, and a couple of dry-goods stores" (*ibid.*, 92).

red, white, and post oak, elm and hickory, to Preston,[34] on the Red River, where Pope's survey was to end. After discharging his men and selling his animals Pope repaired to Washington by way of Fort Washita and Fort Smith.

Pope's direct survey from El Paso to Preston, a measured distance of 639.4 miles, had occupied eighty-three days, of which thirty-one days had been spent in the camp on Delaware Creek, awaiting the results of Captain Taplin's reconnaissance of the Llano Estacado. His route was found to be entirely practicable for railroad construction;[35] almost three hundred and fifty miles of it traversed a fertile, well watered, and abundantly timbered region; of the remaining two hundred and eighty miles, one hundred and sixty were through a country which, although of little agricultural value except in the immediate valley of the Pecos, was nevertheless admirably adapted to the raising of stock, and offered every desirable facility for travel, at any season of the year.[36] To obviate the difficulty of absence of water on the Llano Estacado, Pope advocated the boring of artesian wells.[37]

Emory's Explorations from the Pima Villages to the Colorado.—For the purpose of giving completeness to the railroad reports of the route near the thirty-second parallel, an extract was made from the report by Lieutenant-Colonel Emory of his reconnaissance in 1846 and 1847, from Fort Leavenworth, Missouri, to San Diego. The extract made and printed in the

[34] Preston was located on a bluff, one hundred and fifty feet above the bed of the river and was described as a "small dilapidated place, containing probably five hundred persons" (*ibid.*, 93).

[35] *Ibid.*, 46.

[36] *Ibid.*, 10.

[37] *Ibid.*, 35–38. Pope was later employed during 1855 and 1856 in sinking artesian wells, and found water close to the surface. Report of the Secretary of War, Dec. 1, 1856, in *H. Ex. Docs.*, 34 Cong., 3 sess., I, pt. 2 (894), no. 1, pp. 212–216.

Pacific Railroad Reports[38] was from that portion of the report describing the route from the junction of the San Pedro with the Gila, to the junction of the latter with the Colorado of the West. This connected Lieutenant Parke's survey (from Doña Ana to the Pima villages) with Lieutenant Williamson's surveys in the southern part of the state of California.

Emory arrived at the San Pedro River on November 7, 1846,[39] and on that day entered the country of the Piñon Lano tribe. They were friendly and provided Emory with mules, of which he was badly in need. His camp on the night of the seventh was at the junction of the Gila with "a clear pure stream flowing from under the sand." From the evidences of gold and copper ore everywhere present Emory named the stream Mineral Creek. Everywhere were signs of Indian occupation, one landmark being the remains of a three-story mud house, sixty feet square, pierced for doors and windows; a marine shell, cut into various ornaments, was found there, indicating that the earlier inhabitants either came from the seacoast or trafficked there.[40]

Upon reaching the Pima villages, eighty-five miles from the mouth of the San Pedro, Emory's party was mistaken for a band of Apaches, with whom the Pimas and their neighbors to the west, the Maricopas, were at war. Emory, however, assured them of his friendship, and soon was carrying on a brisk trade with them. The Indians brought corn, frijoles, wheat, and a few bullocks, and demanded beads, red cloth, white domestic, and

[38] *Pacific Railroad Reports*, II, pt. 6. The report of his full reconnaissance from Fort Leavenworth to San Diego is contained in *S. Ex. Docs.*, 30 Cong., 1 sess., III (505), doc. 7. The surveying party headed by Lieutenant-Colonel Emory was attached to the military force under Colonel Kearney, destined for the conquest of New Mexico and the countries beyond. Kearney had two batteries of artillery (six-pounders), three squadrons of the first dragoons, the first regiment of Missouri cavalry and two companies of infantry (*ibid.*, 14).

[39] *Sen. Ex. Docs.*, 30 Cong., 1 sess., III (505), doc. 7, p. 77.

[40] *Ibid.*, 82.

red, white, and post oak, elm and hickory, to Preston,[34] on the Red River, where Pope's survey was to end. After discharging his men and selling his animals Pope repaired to Washington by way of Fort Washita and Fort Smith.

Pope's direct survey from El Paso to Preston, a measured distance of 639.4 miles, had occupied eighty-three days, of which thirty-one days had been spent in the camp on Delaware Creek, awaiting the results of Captain Taplin's reconnaissance of the Llano Estacado. His route was found to be entirely practicable for railroad construction;[35] almost three hundred and fifty miles of it traversed a fertile, well watered, and abundantly timbered region; of the remaining two hundred and eighty miles, one hundred and sixty were through a country which, although of little agricultural value except in the immediate valley of the Pecos, was nevertheless admirably adapted to the raising of stock, and offered every desirable facility for travel, at any season of the year.[36] To obviate the difficulty of absence of water on the Llano Estacado, Pope advocated the boring of artesian wells.[37]

Emory's Explorations from the Pima Villages to the Colorado.—For the purpose of giving completeness to the railroad reports of the route near the thirty-second parallel, an extract was made from the report by Lieutenant-Colonel Emory of his reconnaissance in 1846 and 1847, from Fort Leavenworth, Missouri, to San Diego. The extract made and printed in the

[34] Preston was located on a bluff, one hundred and fifty feet above the bed of the river and was described as a "small dilapidated place, containing probably five hundred persons" (*ibid.*, 93).

[35] *Ibid.*, 46.

[36] *Ibid.*, 10.

[37] *Ibid.*, 35–38. Pope was later employed during 1855 and 1856 in sinking artesian wells, and found water close to the surface. Report of the Secretary of War, Dec. 1, 1856, in *H. Ex. Docs.*, 34 Cong., 3 sess., I, pt. 2 (894), no. 1, pp. 212–216.

descending to the river bottoms. As Emory conducted his examination along the south bank of the Gila but one incident of interest occurred. On November 22, at the junction of the Gila and Colorado, he sighted what he at first believed to be the army of General Castro returning to California; but on subsequent examination it proved to be a party of Mexicans driving a herd of California horses south for use in Castro's cavalry. Emory and Kearny were successful in capturing the entire force and in this manner dealt an unexpected blow at the enemy.

The Emory party delayed several days at the junction, testing both the Colorado and the Gila as to their navigability, and visiting points of interest. Emory makes particular mention of the remains of an old Spanish mission "built near the beginning of the seventeenth century" by Father Kino and later sacked and destroyed by the Indians.[44] In his historical data Emory was, of course, somewhat in error. From the Yuma junction the line was run into San Diego; but as more comprehensive examinations were made in 1853 and 1854 by Williamson and Parke and with the one object of railroad construction, Emory's route will not be traced.

The thirty-second parallel route presented many advantages for railway construction. The most prominent were the low elevation of the mountain passes, and their favorable topographical features, as well as those of the table-lands, embracing over 1000 miles of the route; the favorable character of the surface generally, by which the most costly item of railroad construction, the formation of the road bed, was in a great measure avoided; the shortness of the line, 1600 miles from the navigable waters of the Mississippi to the Pacific; and the temperate climate on the elevated portions in this southern latitude.

[44] *Ibid.*, 95.

CHAPTER VIII

EXPLORATION FOR ROUTES IN CALIFORNIA AND OREGON

Williamson's Surveys to Connect with Routes near the Thirty-fifth and Thirty-second Parallels.—In California an examination, independent of the transcontinental surveys, was made under the leadership of Lieutenant R. S. Williamson. The reason for making this survey distinct lay in the fact that, to any party working from the east, the Sierra Nevada Mountains offered a formidable barrier; being fatigued from the overland journey it would be impossible to make an accurate and detailed investigation of the Pacific ranges. Experienced explorers had long advised fitting out a separate party from the Pacific side. Explorers, both official and unofficial, were also unanimous in the opinion that there was no practicable pass through the Sierra Nevada Mountains to either the Sacramento or the San Joaquin valley north of Kern River; it was not deemed necessary or proper, therefore, to spend any of the limited funds upon this section.[1]

Organization of the Survey.—Under a letter of instructions from the War Department dated May 6, 1853, Williamson was directed to survey and explore the country lying west of the lower Colorado in order to ascertain the practicability of a railroad route connecting that portion of California with the Pacific. He was instructed to rendezvous at Benicia, and having organized his party, "to examine the passes of the Sierra Nevada leading from the San Joaquin and Tulare valleys, and subsequently explore the country to the southeast of the Tulare lakes, to ascertain the most direct practicable railroad route between

[1] Report of Secretary of War Davis, Dec. 1, 1853, *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, p. 21.

Walker's Pass, or such other pass as may be found preferable, and the mouth of the Gila; from this point the survey will be continued to San Diego."[2] He was required to give close attention to every point connected with the location of a railroad, making a general profile of the route by barometric measurements; the botany, geology, and Indian tribes were to be studied as closely as circumstances would permit. A military escort of twenty-eight men would furnish him protection, and the sum of $30,000 was deemed sufficient to defray the expenses of the expeditions.[3]

Williamson received his instructions while in New York and immediately sailed for San Francisco by way of Panama. He was accompanied by Lieutenant J. G. Parke; Lieutenant G. B. Anderson; Dr. A. L. Heerman, naturalist; I. W. Smith, civil engineer; C. Koppel, artist; C. Preuss, draughtsman; and Lieutenant Stoneman, the commander of the escort. San Francisco was reached on June 20, and the party repaired at once to Benicia. There the necessary equipment, horses, mules, thirteen additional men and the escort were secured.

From Benicia to Fort Yuma.[4]—Everything having been made ready, the party on July 10 crossed from Benicia to Martinez, the small town directly opposite. From the latter point Williamson followed the usual wagon road winding south and to the west of Mount Diablo. Fine farms were seen, well fenced, and giving evidence, in the abundance and richness of the crops, of the great fertility of the soil. By a gradual ascent Livermore Valley was reached, the valley at that time being used principally as a cattle ranch.[5]

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[2] Davis to Williamson, *S. Ex. Docs.*, 33 Cong., 1 sess., II (691), no. 1, p. 60.

[3] For complete details as to general route, time and place of disbursement, etc., see *ibid.*, 60–61.

[4] The narrative of Williamson's explorations and reports upon botany, geology and zoology are contained in *Pacific Railroad Reports*, V.

[5] *Pacific Railroad Reports*, V, pt. 1, p. 11.

On June 13 the party reached Livermore's house, four miles from the entrance of the pass. Although the pass was well known and was traversed by the wagon road from San José to the San Joaquin Valley, Williamson determined to explore it and ascertain its practicability for railroad construction. Four days were employed in this examination and the route was found to be practicable. Williamson, however, conjectured that proper examinations would divulge others easier than this.[6]

July 17 the party continued through the valley to Elkhorn Post Office and on the following day advanced twenty-seven miles to the southeast to Grayson[7] on the San Joaquin. The river had overflowed its banks and spread out in a sheet from twenty to thirty miles wide, and the only practicable crossing was at this ferry. Having reached the right bank of the river the survey continued east along the south side of the Tuolumne and in twenty-five miles reached the ordinary wagon road leading to Fort Miller, a military post on the San Joaquin in the foothills of the Sierra Nevada. A delay of a week was spent at the fort, making repairs, securing supplies, and computing distances. The route as traveled from Martinez was found to be one hundred and seventy-four miles.[8]

On July 31 the party left the San Joaquin, and turning southward came to the plain of the Tulare Valley. On the road Williamson met Senator Gwin, returning from a trip to Tejon Pass, where he had been to examine personally the adaptation of the country for a railroad. Twenty-six miles from the San Joaquin, Kings River (sometimes called Lake Fork)[9] was

[6] *Ibid.*, pt. 1, p. 12. Accurate surveys, however, have settled Livermore's as the most practicable pass through the Diablo Range.

[7] Described by Williamson as "one of the cities of California, which looks very well on paper, but in which there are but two houses at present" (*ibid.*, pt. 1, p. 12).

[8] *Ibid.*, pt. 1, p. 13.

[9] *Ibid.*, pt. 1, p. 13; pt. 2, p. 25. This river on issuing from the mountains divided into eight different streams, which later united and flowed into the delta as one stream.

reached, and after following its right bank for twelve miles a crossing was effected at Poole's ferry. From King's River a march of twenty-eight miles was made to the Pi-pi-yu-na, or Kah-wée-ya, or Four Creeks, which as they emerged from the mountains formed a delta with a base fifteen miles in length.[10] With a guide whom Godey procured from the settlement the survey continued southeast close to the base of the mountains, to O-co-ya, or Posé Creek,[11] seventy-six miles from Four Creeks.

From Posé Creek as a base of operations Williamson determined to make an examination of Walker's Pass and then follow along the ridge of the Sierra Nevada to their junction with the Coast Range.[12] In this manner he would be able to note each depression and determine the accessibility from either side, examining in detail the least difficult openings. Having despatched the main train to Fort Miller for provisions, he set out on August 10 for the mountains. The route led up Posé Creek for some distance and then crossed by a rough and tortuous trail into the valley of Kern River. After crossing the Kern he followed up the valley of Chay-o-poo-ya-pah Creek,[13] and within about thirty-two miles reached Walker's Pass.[14] He made a

[10] The value and importance of this fertile alluvial delta had already attracted numerous American settlers, and the town of Woodville (with one house) was in the process of construction.

[11] Modern Posey Creek.

[12] *Pacific Railroad Reports*, V, pt. 1, p. 14.

[13] From an Indian word meaning "creek of the bulrushes." The Indians, who were numerous in the Kern Valley, gathered the bulrush, or cane, and when dry, threshed from the leaves a substance much like sugar. This was an important article of food among them (*ibid.*, pt. 1, p. 1).

[14] Named for Joseph Walker, an old mountaineer and trapper in California long before the first exploring parties had entered. He served as guide to Fremont in 1845 and passed through the defile from east to west, while Fremont had detoured by Sutter's Fort. In 1844 Fremont had crossed the Sierras about half a degree south of this pass, but had never traversed Walker's Pass until 1854. He long believed that Tah-ee-chay-pah Pass was Walker's Pass and this undoubtedly accounts for the general belief at that time in the practicability of the latter. In Williamson's party were two men, Godey and Pruess, who were with Fremont in 1845–46 and had accompanied the division which followed the eastern base of the Sierras. They confirmed Williamson's location of Walker's Pass.

thorough examination of the pass, and found that the steep grades on either side rendered it impracticable. Its position he considered to be "one of the worst of all known passes in the Sierra Nevada."[15] He concludes that all assertions of practicability referred to an entirely different place; that the inaccuracy of the statement was due entirely to an ignorance of localities, and such ignorance could be excused when the localities were in a country so little known.

Having examined Walker's Pass, Williamson continued south and examined another depression in the divide, called Hum-pah-ya-mup after the creek flowing from it. Upon examination this proved to be of the same height as Walker's (5300 feet) but with a steeper ascent and more closed. Williamson accordingly rejected this as impracticable.[16] The reconnaissance then crossed the divide by Hum-pah-ya-mup Creek, and after crossing a series of spurs, continued southwest to Tah-ee-chay-pah Creek.[17] Establishing camp on the creek (which flowed west toward Tulare Valley), an exploration was made of the approaches from the Great Basin. The height of the summit was four thousand and twenty feet, the lowest point of the Sierra examined by Williamson.[18]

On August 21 Williamson set out for the Tejon,[19] the extreme southern portion of the Tulare Valley. The Tejon was found to be a beautiful place, inhabited by semi-civilized Indians, some of whom spoke the Spanish language. Several whites had "squatted" there, waiting till they could perfect a title to the land. Near the eastern extremity of the Tejon was a break

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[15] *Pacific Railroad Reports*, V, pt. 1, p. 6.

[16] *Ibid.*, pt. 1, p. 18.

[17] Present Tehachapi. This creek was called Pass Creek by Fremont in 1844.

[18] *Pacific Railroad Reports*, V, pt. 1, p. 19. This proved to be a more favorable pass in position and grades than any other in the Sierra. It is traversed today by the Southern Pacific.

[19] Pronounced Tay-hone. Its derivation, whether Spanish or Indian, is uncertain.

in the mountains, known as Tejon Pass. A wagon road, described by Williamson as "the worst I ever saw," led through it to Los Angeles.[20] This pass had been much and favorably spoken of as a railroad pass. Fifteen miles west of Tejon lay another pass, known as the Cañada de las Uvas, through which a pack trail led to Los Angeles.

In order to thoroughly reconnoiter these two passes, Williamson determined to go through the *cañada*, and then work along the southeastern base of the mountains, returning to camp by the wagon road leading through Tejon Pass. The *cañada* on examination proved to be lower than many passes examined, while the Tejon was found to be peculiar in that though it had a great altitude the ascent and descent were gentle.[21]

On August 29 Williamson returned to camp on Posé Creek, the wagon train arriving from Fort Miller on the same day. The second day following the survey advanced eleven miles to Kern, or Porciuncula River, and thence pursued a direct line to the Tejon. Depot camp was established there and Parke was sent on a hasty reconnaissance to Los Angeles.

On September 5 the survey of Tejon Pass was commenced with chain, compass, and barometer. Williamson found the pass to have an altitude of 5285 feet.[22] The difficulties presented by the grades rendered this pass unfit for railroad purposes.[23] Upon examination, the Cañada de las Uvas, situated at the junction of the Sierra Nevada and Coast Range, was found to have an altitude of 1640 feet.[24]

Of the five passes of the Sierra Nevada examined, two, Tah-ee-chay-pah and Cañada de las Uvas, were far the best. Neither

[20] *Pacific Railroad Reports*, V, pt. 1, p. 21.

[21] *Ibid.*, pt. 1, p. 21; pt. 2, p. 39.

[22] Most recent measurements have determined its altitude to be 4230 feet.

[23] *Pacific Railroad Reports*, V, pt. 1, p. 25.

[24] This is evidently a mistake in printing or measurements were poorly taken. More recent surveys give the pass an altitude equal to that of the Tejon.

possessed an advantage in situation in reference to transcontinental routes; timber and water abounded in each; but the grades of the latter were more favorable.

Parke meanwhile had returned to the Tejon after a successful reconnaissance to Los Angeles. While there he had learned of a pass in the mountains east of that pueblo and lying between the two mountains of San Bernardino and San Gorgonio (San Gorgonio Pass). This pass was little known and had never been considered in connection with a railroad.[25] Upon examination, Parke found it to be practicable.

According to his instructions, Williamson, after exploring the passes of the Sierra Nevada, was to run a line to the mouth of the Gila. But of this intervening country little was known except that it was a desert and that many lives had been lost in attempting to cross it. Williamson, therefore, decided to conduct the survey to a point in the desert approximately halfway between the Sierras and the Mojave; returning he would strike out over the mountains to the Mojave, and from that river connect with the line previously surveyed.[26] The main train was sent through Cañada de las Uvas with instructions to wait near the pass of San Francisco. Williamson then set out to examine the Great Basin. From the summit of the Sierra Nevada a fine view of the bare and arid surface of the Great Basin was obtained. A little north of east lay a system of isolated peaks and short ridges called by Williamson Last Mountains, and it was toward this chain that he directed his survey. Having gone about thirty miles east of the base of the Sierras and finding but few streams and springs, he turned back to San Francisquito Pass. When he advanced to the Mojave a few days later Williamson turned west and ran a line connecting with this point of departure. He found the country to be a system of inclined

[25] *Pacific Railroad Reports*, V, pt. 1, p. 27.
[26] *Ibid.*, pt. 1, p. 27.

plains, or slopes, with a maximum grade of one hundred feet to the mile. No serious impediment was offered to railroad construction.[27]

Having arrived at the camp of the main train he proceeded to examine the San Francisco Pass with odometer and barometer. He found that although a wagon road led through the pass into the valley of the Santa Clara, the grades were too great for railroad purposes, and the cañon so narrow as to require much cutting. While reconnoitering the range Williamson discovered a new pass. A survey, begun eight miles out in the Great Basin, revealed a gentle ascent and the descent into the Santa Clara Valley was equally gentle. The route thence to the ocean along the valley was easy.[28]

Camp at San Francisquito having been broken up the party set out for the Mojave River, skirting the eastern line of the mountains. Continuing fifteen miles Johnson's River was reached and named. It then required a journey of a day and a night to reach the old Spanish trail[29] at the Mojave. Establishing a base there, several reconnaissances were made. From observations it was evident that no progress could be made towards the mouth of the Gila. Parke was accordingly sent to run a line following up the Mojave, while Williamson led a party down the river. The latter, after following the ordinary road for thirty-six miles, turned north and made an examination of the cañon of the Mojave as it breaks through the San Bernardino Range. He then turned back and completed the line previously run into the Great Basin from the Tejon.

Parke, upon his reconnaissance, met with very rugged country. He believed that it would be impossible for any railroad

[27] The Atchison, Topeka and Santa Fé between Barstow and Mojave traverses much of the route explored by Williamson.

[28] This pass was subsequently called Williamson Pass in honor of the explorer.

[29] At that time better known as the Mormon road, leading from Great Salt Lake to San Bernardino and Los Angeles.

to cross the mountains which lay east of the Coast Range and near the headwaters of the Mojave.[30] From observations it was evident that a route could not be made to the Gila either by ascending the Mojave or by crossing the chain of mountains which lay southeast of the river.[31] Parke was accordingly detailed to cross with the wagon train through Cajon Pass and recross the range at the pass of San Gorgonio, thus turning the source of the Mojave and the lofty Mount San Bernardino. He would then follow along the eastern base to Warner's Pass and examine the latter thoroughly. A second division under Williamson would descend the Mojave to its supposed junction with the Colorado, and follow the latter to the Gila. He would be accompanied by the entire escort, as the Indians of the Colorado were known to be numerous.[32]

A reconnoitering expedition under a subordinate officer had meanwhile been examining the country in the neighborhood of San Francisquito Pass. He discovered a second practicable pass which led from the Santa Clara Valley across the Susannah (Santa Susana) Mountains to the Mission of San Fernando on the Los Angeles River.[33] It was believed that other passes would be available as the range had been but little explored. From San Fernando the country could be traversed in any direction to the coast. From Los Angeles the reconnaissance continued to the valley of San Bernardino,[34] several practicable routes being

[30] *Pacific Railroad Reports*, V, pt. 1, p. 32.

[31] *Ibid.*

[32] *Ibid.*

[33] The route followed by the Southern Pacific from Saugus to Fernando. Early emigration from Los Angeles to the Tulare Valley and the southern mines along the San Joaquin usually followed San Fernando and San Francisquito passes into the Great Basin and thence by way of Tejon Pass (*ibid.*, pt. 2, p. 80).

[34] The Mormons had arrived in this valley from the Great Salt Lake in the fall of 1851. In 1853 the city consisted of an open square, surrounded by log houses and stout pickets, it being necessary to bring their dwellings together in this way in order to be secure from attacks of the Indians.

found. From this valley the route turned into the Cajon[35] Pass, which leads through the Coast Range toward the Mojave River. This pass trended north and south, its more gradual slope being from the side of the Mojave.[36]

This reconnaissance was completed on November 6, and on November 8 the party divided to pursue the operations above outlined. Williamson followed down the Mojave River for two days, thoroughly examining the country and making observations in advance from high points of land. Then, leaving the river, he traveled for several days over an unknown region, destitute of wood, water, or grass. Realizing that he was still more than a hundred miles from the Colorado, he turned back and rejoined the main party at Agua Caliente, east of San Diego.[37]

Parke, at whose camp Williamson arrived on November 29, after leaving the camp on the Mojave had passed through Cajon Pass to San Bernardino. He then recrossed the range by San Gorgonio Pass,[38] which the survey proved to be one of the most practicable in the Coast Range.[39] Having gained the eastern base of the mountains Parke turned southeast, through a region inhabited by friendly Indians. After traveling eighty-eight miles over the unexplored border of the Colorado desert, the emigrant road leading to Fort Yuma was reached. Then turning northwest on the trail, the divide was crossed through Warner's Pass to Agua Caliente. The party having been united at this point, there remained but two objects to be accomplished:

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[35] Pronounced Kah-hón. This pass had been known and much used for many years, being the point where the old Spanish trail from New Mexico reached the settlements of the coast.

[36] This is the route followed by the Atchison, Topeka and Santa Fé into San Bernardino.

[37] For full account of his operations see *Pacific Railroad Reports*, V, pt. 1, pp. 33–34.

[38] This pass and the neighboring mountains no doubt received their name from that of the rancho, the land being styled in the Spanish grant, the "Rancho de San Gorgonio" (*ibid.*, pt. 1, p. 37).

[39] It is today traversed by the Southern Pacific Railroad.

(1) to examine the passes leading to San Diego, and (2) to survey the region east to Fort Yuma.[40]

Parke was accordingly instructed to follow west from Warner's Pass to its mouth and then follow down the coast to San Diego. Williamson set out by way of San Felipe and Carrizo Creek for the Colorado. The measured distance to Algodones was eighty and one-half miles and the way practicable. Returning to San Diego by way of Warner's Pass, he made a more minute reconnaissance in order to determine the most suitable route across the Coast Range. Parke had found the route by Warner's Creek to the ocean utterly impracticable.[41] Thorough examinations had failed to reveal any pass leading direct to San Diego.[42]

Results of the Survey.—Williamson concluded that from the mouth of the Gila an easy route could be taken to San Pedro by means of the San Gorgonio Pass and the San Bernardino Valley. The Cajon Pass was likewise practicable. The best ports on the Pacific, however, were at San Francisco and San Diego. To reach the former port two routes were practicable: (1) to follow up the Colorado and cross the Great Basin, which as yet was unexplored; and (2) to cross from San Bernardino Valley into that of the Santa Clara, and thence by way of New (or Williamson's) Pass to the Great Basin. The Sierras could be crossed by several practicable passes, preferably the Tah-ee-chay-pah, into the Tulare Valley; thence an easy route existed to San Francisco, either by Livermore's Pass or Suisun Bay. To reach San Diego, Williamson believed that San Gorgonio Pass offered the only practicable route.

Williamson, in his explorations lasting from July 10 until December 23, had explored more than one thousand three

[40] *Pacific Railroad Reports*, V, pt. 1, p. 38.

[41] *Ibid.*, pt. 1, p. 41. Williamson's more detailed examinations also proved the impracticability of Warner's Pass.

[42] The San Diego and Arizona Railroad is forced to turn the mountains south into Mexican territory before advancing to Yuma.

hundred miles of territory; he had examined with the utmost thoroughness six passes through the Sierra Nevada and six through the Coast Range. His survey was made in much more detail than that of any other Pacific railroad survey, and its thoroughness is best attested by the fact that railroad lines in California have closely followed the routes recommended by him.

ROUTES IN CALIFORNIA AND OREGON EXPLORED BY WILLIAMSON AND ABBOT

Organization of the Party.—In 1855 additional appropriations were made for continuing the explorations for Pacific railroad routes. This enabled a government party to examine thoroughly the hitherto almost unknown region of upper California and Oregon. Under instructions from the War Department, dated May 1, 1855, Lieutenant Williamson was directed "to make such explorations and surveys as will determine the practicability, or otherwise, of connecting the Sacramento Valley, in California, with the Columbia river, Oregon Territory, by a railroad, either by the Willamette valley, or... by the valley of Des Chutes river"; and "to make the necessary examinations and surveys to determine if a route practicable for a railroad exists crossing the Sierra Nevada, at or near the source of Carson river."[43] Lieutenant H. L. Abbot was detailed as chief assistant of this expedition, which was subsidized by the government to the extent of $42,000.[44]

Williamson, accompanied by Abbot and five civilian assistants, sailed from New York on May 5, arriving in San Francisco May 20, 1855. On July 10 the party, consisting of the above and nineteen men under the supervision of Coleman, the pack master, began the survey from Benicia. Unlike all other

[43] Secretary of War Davis to Williamson, May 1, 1855, in *Pacific Railroad Reports*, VI, pt. 1, p. 9.

[44] *Ibid.*, pt. 1, p. 11.

expeditions, no wagons were taken; a pack train and instrument cart were the sole means of transport.

The Survey from Benicia to Fort Vancouver.—The route, leaving Benicia, crossed the hills to Suisun Bay and thence followed the usual road north to Vacaville, a town of three houses. Thence crossing Putos[45] Creek and Cache Creek the Sacramento was reached at Knight's Rancho. The party was forced to turn south to the town of Fremont in order to effect a crossing to Vernon at the mouth of the Feather River. The latter stream was followed through Marysville to Hamilton, where the route turned northwest, crossing Butte, Chico, Pork, Deer, Mill, and Antelope creeks to Fort Reading. From the crossing of the latter stream a reconnaissance was made to Red Bluff and thence up the west bank of the river.

At Fort Reading Williamson was provided with the escort which his instructions had required. It consisted of three officers and one hundred men; in addition an experienced guide and escort were procured. From the fort he turned east by way of McCumber's Flat on Battle Creek and crossed the western chain of the Sierra Nevada through Noble's Pass,[46] north of Lassen's Butte.

The usual emigrant road was followed to Hat Creek, and the route led thence down the valley of Canoe Creek to Pit River.[47] This region was very broken and rough and devoid of trails; the sole inhabitants were a few Pitt River Indians, "treacherous and bloody in their dispositions and disgusting in their habits."[48]

[45] Named after a tribe of Indians who lived on its bank.

[46] The only other pass through this chain, that of the Pit River or upper Sacramento, had been surveyed and favorably reported upon by Lieutenant E. G. Beckwith in 1854, see above, page 00.

[47] Pit River derived its name from the pits dug by Indians to entrap game. These pits were about six feet deep and lightly covered with twigs and grasses. On this account the name of the river should be spelled with but one t; on all early maps, however, it appears with a double t.

[48] *Pacific Railroad Reports*, VI, pt. 1, p. 61.

A base being established at the mouth of Canoe Creek, reconnaissances were made in the vicinity. Lieutenant Williamson made an unsuccessful attempt to run a line through the lower cañon.[49]

From Canoe Creek the survey advanced along the south bank of Pitt River to the mouth of Fall River and thence to the mouth of the upper cañon. There Pitt River was crossed and a reconnaissance made of the cañon, which was found practicable for a railroad.[50] Additional reconnaissances were made striking portions of Lassen's road and the old Oregon trail, while the main train continued northwest to Wright Lake. Williamson then followed the west shore of the lake and crossed rolling hills to Rhett Lake. There his route joined the emigrant road which led from Goose Lake along the northern border of Wright Lake. The ravine leading to Rhett Lake had been the scene of many bloody massacres by the Indians; it was easy for the savages to escape in their canoes and hide in the tules of the lake[51] after committing their outrages.

At Lost River, which flows into Rhett Lake, the party was divided. Williamson designed to examine the west side of lower Klamath Lake to discover whether or not Klamath River flowed through the lake.[52] The main party followed up the eastern bank of Lost River to the Natural Bridge, crossing the river by it, and thence continued north to the southern extremity of the upper lake. There the reconnoitering party rejoined the main train, and the survey continued north, at times keeping to the hills to avoid the rough lake shore. This region had never been traversed except by Indians, whose trails were numerous. By following the east bank of Williamson River[53] he reached

[49] *Ibid.*, pt. 1, p. 63.

[50] *Ibid.*, pt. 1, pp. 431, 63.

[51] *Ibid.*, pt. 1, p. 65.

[52] *Ibid.*, pt. 1, p. 66.

[53] Named after the leader of this expedition, but called by Lieutenant Abbott in the narrative, Klamath River.

the Klamath Marsh. A few Klamath Indians[54] who dared approach made known by signs and a few words of Chinook and English that the only route by which the Des Chutes Valley could be reached lay west of the marsh. Accordingly Williamson crossed the river, and, turning north, in thirty-seven miles reached the beautiful valley of the Des Chutes. There a wagon road was noticed, the first since leaving Rhett Lake, but as it bore off toward the Walla Walla country it was not used.[55] After crossing to the left bank of the river, Williamson led a detached party to examine the mountainous region to the west in search of a pass. The main party continued down the river, laying out a difficult and tortuous route; detours were often necessarily made to avoid sharp cañons. The parties were reunited on Why-chus Creek.[56] Williamson had been unsuccessful in discovering a pass near the Snow Peaks (Three Sisters) but had made a thorough examination of the dividing ridge between the waters of the McKenzie River and those of the Des Chutes.

For future operations it was decided that Abbot should continue to Fort Dalles for supplies, while Williamson continued his explorations in the Cascades.[57] They were to meet again on Why-chus Creek. Williamson, on his first operation, occupied fourteen days in trying to reach the Willamette Valley in the vicinity of Three Sisters. He wasted much time in following blind Indian trails, and was forced to return to Why-chus Creek unsuccessful.[58]

Abbot, meanwhile, had continued north, following the general direction of the Des Chutes; he crossed Que-y-ee Creek near

[54] For an account of the manner of living, customs, language, etc., of this tribe see *Pacific Railroad Reports*, VI, pt. 1, pp. 69–72.

[55] *Ibid.*, pt. 1, p. 72.

[56] Undoubtedly modern Squaw Creek.

[57] *Pacific Railroad Reports*, VI, pt. 1, p. 75.

[58] For a more detailed account of his operations see *ibid.*, pt. 1, pp. 79–81.

Black Butte, and then in succession, Mpto-ly-as (Metolius), Chit-tike and Wam-chuck[59] creeks to Nee-Nee Springs. There he found a trail which he followed across Tysch (Tygh) Prairie and Creek to Evelyn's Rancho. There he struck the emigrant road which led from the Willamette Valley to the Dalles, and followed it to the fort, which was situated a mile south of the town.

While waiting at the Dalles for provisions to arrive from Fort Vancouver, Abbot met William, a Chinook Indian, whom Fremont in 1843 had taken east to be educated. Asked about a summer trail which Fremont had said led up the Des Chutes Valley nearer the Cascades, he knew nothing of it. Abbot concluded that his route, impracticable as it was, was the best that could be found;[60] on his return journey to Why-chus Creek, he made no attempt at new explorations.

On September 24 the party again divided, Williamson to examine the pass south of Diamond Peak,[61] and then to proceed to Fort Vancouver. Abbot was instructed to search for a pass between Mount Hood and Mount Jefferson, and to carry the line thence to Fort Vancouver.[62] Williamson's route lay southeast along the Des Chutes Valley, traversing territory previously explored. Having arrived at the emigrant trail, he turned west and crossed the main divide into the Willamette Valley. Following the well marked trail he turned north along the east side of the river, and after crossing McKenzie's Fork and several smaller affluents reached Oregon City. Continuing thence to Fort Vancouver, Williamson terminated his field work and departed for San Francisco.

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[59] This stream received its name from the hot springs along its banks. The Indian appellation has been changed to Warm Spring River.

[60] *Pacific Railroad Reports*, VI, pt. 1, p. 88.

[61] This pass was much used by emigration to and from the Umpqua Valley.

[62] *Pacific Railroad Reports*, VI, pt. 1, p. 91.

Abbot, meanwhile, accompanied by a few helpers and a small guard, worked northwest. A thorough examination was made of the headwaters of Mpto-ly-as Creek but no pass was found; and he was forced to follow his old route as far as Nee-Nee Springs. At Evelyn's Rancho Abbot learned of a general uprising of the Indians of central and western Oregon against the whites. He realized his danger since the party was unprotected and far from the Willamette Valley. It was only with difficulty that he procured a Chinook Indian to guide him toward the supposed pass south of Mount Hood.[63]

From Nee-Nee Springs a westerly course was pursued, crossing the headwaters of Wil-la-mit, Wan-nas-see, and Tysch creeks to the pass south of Mount Hood. This was traversed with great difficulty and the descent made into the Willamette Valley. The first settlement reached was Currin's[64] Rancho in the Clackamas Prairie. There Abbot was surprised by reading in a paper the account of the massacre of his party in the Cascades.[65] Proceeding to Oregon City, instructions were received from Lieutenant Williamson to examine and survey a route to Fort Reading by way of Forts Lane and Jones. While there, Abbot suffered the loss of his entire escort; every soldier was needed to protect the valley from the Indians. This was a serious obstacle to the survey, as the Indians were at war in the Rogue River Valley, through which it must necessarily pass, and, furthermore, all communication between Fort Lane and the Umpqua Valley was cut off.[66]

Although Abbot proceeded to Fort Vancouver and there wrote a letter of remonstrance to the commandant at the Dalles,

[63] *Ibid.*, pt. 1, p. 96.

[64] The name is perpetuated in Currinsville on the Clackamas River.

[65] *Pacific Railroad Reports*, VI, pt. 1, p. 102.

[66] *Ibid.*

Major Rains,[67] it was of no avail. The loss of the escort deprived him of the opportunity of making many lateral examinations to determine the practicability of a railroad. It thus defeated, in part, the objects for which a large appropriation had been set aside by the War Department. Abbot had only twenty-eight men, and of these ten were unreliable Mexican packers.[68] Most of the men were unarmed, there being but five rifles in the company.

From Fort Vancouver to Fort Reading.—Abbot determined to continue, however, believing that Major Rains would send an escort at the earliest opportunity.[69] On October 22 he set out from Oregon City and advanced to Salem; there he crossed the Willamette and followed the west bank through Corvallis to Eugene. From the latter point he continued along the coast fork of the river in a southwesterly direction, and crossed the Calapooya Mountains by the Pass Creek road into the Umpqua Valley.[70] On reaching Winchester, on the south bank of the North Umpqua, new reports were received of Indian hostility in the Rogue River Valley. An election of volunteer officers was in progress at Roseburg; Abbot awaited the results and secured from the new commander, Martin, an escort as far as Cañonville. The journey through the Umpqua Pass was difficult owing to the narrowness of the cañon; the road through this pass had been built in 1853 by Major Alvord. It is remarkable that the intelligent Rogue River Indians did not think of holding this defile against the whites. After traversing a devastated country as far as Wolf Creek, Abbot lost the

[67] Abbott to Rains, October 21, 1855, *ibid.*, pt. 1, pp. 104–105. Lieutenant Williamson had previously written a letter protesting against the loss of his escort. He showed the extreme importance to the government of the successful completion of this survey (Williamson to Rains, October 10, 1855, *ibid.*, pt. 1, pp. 103–104).

[68] Abbott to Rains, October 21, 1855, *ibid.*, pt. 1, p. 105.

[69] *Ibid.*

[70] The route of the Southern Pacific.

civilian guard which he had procured at Roseburg. At Grave Creek, however, he was accommodated by Captain Smith, who was on the verge of retreat to Fort Lane. The whites had been unable to quell the Indians and were gradually giving way.[71]

Continuing southwest, the Rogue River was crossed at Evan's Ferry, and Abbot then advanced to Fort Lane, at the junction of Stewart River with the Rogue.[72] After following up the valley of the Stewart the Siskiyou Mountains were easily crossed. The Klamath River was crossed near the mouth of Cottonwood Creek, and the road led thence to Yreka. This was a flourishing town in the Shasta Valley, the center of a lumbering district and the depot for the northern mines.[73] Crossing Little Scott's Mountains, Fort Jones on Scott's River was reached. There Abbot was further deprived of men, his commissary and his quartermaster receiving orders to remain at the fort. This circumstance prevented Abbot from examining the Sacramento Valley with detached parties as he had proposed.[74]

Upon leaving Fort Jones the route lay in a southerly direction up Scott's Valley. Scott's Mountains, separating this valley from that of the Trinity River, were crossed; the route was found to be bad, although that was the most traveled route between the Sacramento Valley and Yreka. Crossing the Trinity Mountains the route led into the valley of Clear Creek and to the town of Shasta; thence it was but seventeen miles over a good country to Fort Reading.

At Fort Reading the field operations ended. Lieutenant Williamson arrived from San Francisco and stated that, owing to the lateness of the season, the Sierra Nevada Mountains at the head of Carson River would not be explored. The state of Cali-

[71] *Ibid.*, pt. 1, p. 108.

[72] The fort was situated in a fertile and settled region; but destructive Indian outbreaks were frequent (*ibid.*, pt. 1, p. 109).

[73] *Ibid.*, pt. 1, p. 110.

[74] *Ibid.*

fornia, moreover, had anticipated the government in having an examination made of this section.

Results of the Expedition: Summary and Conclusion.—From Benicia to Fort Reading a practicable route had been marked out, two hundred and three miles in length. From the latter point to the Columbia River, two routes were found available, one east, and one west of the Cascade Range. The eastern route, excellent to the head of the Des Chutes Valley, there encountered difficulties which rendered it almost impracticable for the remainder of the distance. By utilizing the pass near Diamond Peak, the road could be made to pass through one hundred and fifty miles of settled and fertile country.

The region west of the Cascades had not been so well examined, because of the loss of the escort and of Indian hostilities. Of the four hundred and seventy miles surveyed, three hundred were found to be easy for railroad construction, while eighty were impracticable. The entire route was but little elevated, and was found to be free from snow. The Willamette, Umpqua, and Rogue River valleys were very fertile and well settled, and were in great need of improved means of communication in order to develop their resources. The mining region of northern California, likewise, was in need of development.

The great importance of the Williamson-Abbot exploration lay in the thorough examination made of the Cascade Range. Their observations of distances, practicability of river valleys and passes, and adaptability of the soil to cultivation were an invaluable contribution to the existing knowledge of Oregon Territory.

PARKE'S EXPLORATIONS FROM SAN FRANCISCO BAY TO LOS ANGELES WEST OF THE COAST RANGE

Organization of the Expedition.—Under instructions of the War Department of October 2, 1854, Lieutenant J. G. Parke was ordered to conduct explorations to determine the practicability of a railroad route from San Francisco Bay to the plains of Los Angeles west of the Coast Range. He was then to determine whether the valley of the Mojave River joined that of the Colorado and whether it was practicable for a railroad; also he was to explore the line recommended for examination by Lieutenant Whipple between Soda Lake, on the Mojave River, and the Colorado, by the Chem-e-hue-vas Plain, or Valley. Having completed this work his instructions required him to continue to the Gila River that he might determine more fully the practicability for a railroad in the region between the Pima villages and the mouth of the San Pedro, and thence to the Rio Grande.[1]

Parke's company, consisting of himself, a geologist, a civil engineer, a draughtsman, a meteorologist, and a computer was organized in New York, and arrived at San Francisco, November 1, 1854. Preparations were completed at Benicia and Parke then set out by way of Martinez and the San Ramon Valley for San José.[2] At the latter point the actual exploration began and the first operation advanced the survey into the valley of the Rio Pajaro. This stream was reconnoitered to its mouth; other detailed parties examined the hills between the Pajaro[3] and the Salinas. The main train then advanced up the valley of the latter to Ranchería de Espinosa, nineteen miles above Mission

[1] Secretary of War Davis to Lieutenant J. G. Parke, October 2, 1854, in *Pacific Railroad Reports*, VII, Introduction, 13–15. His instructions allowed him little latitude as to route; ample funds however, were provided, as he was allowed $39,000 to draw upon.

[2] The report of Parke's explorations is contained in *Pacific Railroad Reports*, VII, pt. 1.

[3] Known as the San Benito for the greater part of its course.

de la Soledad. There a division was made; one party turned to the right and advanced by way of San Miguelito and Rio de San Antonio to Mission San Miguel. Joining there the second party, which had ascended the Salinas, the survey proceeded to Santa Margarita Rancho.

From this point various explorations and reconnaissances were made. One party continued up the Salinas River to its source and found a practicable connection between its left fork and the Cuyama Plain on the direct line to Los Angeles. At the same time a reconnaissance was conducted up the Rio de la Estrella, or right fork of the Salinas, debouching at San Miguel. This river ran almost parallel to the Salinas, but headed farther to the south and opposite the Cuyama Plain, thus giving but one summit for passage by a railroad.[4] This new summit was explored establishing the connection with the Cuyama Plain.

From Santa Margarita a third party was sent through the San Luis Pass. This pass led across the Santa Lucia Mountains into the valley of the Rio de San Luis and to the Mission of San Luis Obispo. This survey was later pushed down to the beach at the mouth of Arroyo Grande. The main train then advanced by the mission to Beebe's Rancho, where a wagon road was struck leading through Napoma (Nipomo) to the Santa Maria River. The route led thence by way of Tres (Los) Alamos and Laguna to the Mission of Santa Inez.[5]

From the mission explorations were made connecting the valley of the Santa Inez with that of the Santa Maria by three lines: one led directly north to the latter river and followed it thence to the coast; the second, turning west, passed by Mission de la Purísima, and thence north to the Santa Maria; a third checked the observations made by the main train.

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[4] *Pacific Railroad Reports*, VII, pt. 1, p. 1.

[5] The route followed by the Pacific Coast Railroad between San Luis Obispo and Los Alamos is identical with the line surveyed by Parke.

Continuing the survey, the Sierra de la Santa Inez was crossed by Gaviota Pass. This proved to be a difficult route, and a reconnaissance was therefore made, turning the range to the west and advancing along the coast by points Arguello and Concepcion, to Santa Barbara. This route proved more practicable and has been followed by the Southern Pacific. At the same time a second party under Campbell set out from Santa Barbara and explored the San Marcos Pass (the bridle path or pack route across the Santa Inez Mountains),[6] to the source of the Santa Inez River.

From Santa Barbara, the survey advanced along the coast to the vicinity of Mission San Buenaventura. From this point an attempt was made to connect with the line previously run into the Cuyama Plain. But upon reaching the mountains, progress was blocked by the roughness of the country and by snow. Cut off in this direction, the party turned south into the Santa Clara Plain and an examination was then made up the valley to the San Francisquito Rancho.[7]

Parke was still determined to reach the Cuyama Plain from the south, and sent a party through the Cañada de las Uvas into the Tulare Valley. The route then turned west, and passed north of the Santa Emilia[8] Mountain to the Cuyama Plain. It was the plan to find a practicable connection between the plain and Los Angeles and thus to complete the line already extended from the Salinas River, and the party therefore traced the Santa Maria River to its source. It was necessary then to cross a sharp divide in order to descend the valley of the Rio Piru, a tributary of the Santa Clara. The Santa Emilia Mountain had thus been circled but no practicable railroad route discovered.

Turning back from San Francisquito the survey followed down the Santa Clara to the coast road leading to Los Angeles.

[6] *Pacific Railroad Reports*, VII, pt. 1, p. 2.

[7] See above, p. 00.

[8] My conjecture is that this is the mountain now called San Emigdio.

This road traversed Semi Pass and the San Fernando Plain to the city, where was completed the first division of the survey lasting from November 20, 1854, to March 20, 1855.

The survey of Parke contributed new information upon the Coast Range and was the first complete examination of the coast route now followed by the Southern Pacific.

Parke's Examination of the Mojave Valley.—The second portion of Parke's survey, that of the Mojave Valley, began on April 2, 1855. From Los Angeles he followed the usual route through San Bernardino and the Cajon Pass, reached the Mojave, and followed it to its sink.[9] Detailed reconnaissances were made in the vicinity of the sink, but no outlet to the Colorado was found.[10]

Parke did not undertake to examine a route across the Chemehuevas Desert as his instructions required. He deemed it too hazardous, as he had heard from hunters and trappers that there was no water for at least one hundred and ten miles. Accordingly he returned to Los Angeles and began preparations for his survey of the Gila route.[11]

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[9] This route had previously been examined by both Lieutenant Whipple and Lieutenant Williamson. See above, p. 00, p. 00.

[10] *Pacific Railroad Reports*, VII, pt. 1, p. 3.

[11] The account of this operation has already been given in Chapter VII, as it served further to develop the practicability of the thirty-second parallel route.

CHAPTER IX

CONCLUSION

The Pacific railroad surveys of 1853–1855 proved conclusively that not one but several practicable routes existed between the Mississippi River and the Pacific Ocean. Of the five great transcontinental lines, the routes, in general, of four were examined and recommended by the explorers. The Northern Pacific route was examined in great detail by Governor Stevens; the route of the Gould allied lines was explored almost entirely by Gunnison and Beckwith; Lieutenant Whipple marked the route for the Santa Fé west from Albuquerque; and the route of the Southern Pacific and Texas Pacific was explored by Parke and Pope.

Besides contributing geographical information which was later to aid in the location of railroad lines, the geological, zoological, and botanical reports contributed information which influenced the settlement of the western regions. Only by looking at a map of the explorations can one grasp their great extent and significance. No section of the country was neglected which it was thought would contribute to the building of a railroad. There were but few regions not actually touched by the surveys. The Platte Valley and South Pass had been so often traversed, that a more minute examination would have caused a useless expense. It was intended to examine the Sierra Nevada Mountains between Madeline and Walker's passes, but the legislature of California had anticipated the War Department by a detailed survey. Other regions not covered by the survey were the arid deserts of southern Nevada and the southeastern portion of Texas; the former was still unfit for cultivation and settlement,

and hence would offer no inducements to railroad construction; the latter region was being so rapidly settled as to require no additional information.

Reports began to pour in upon the War Department in 1854. These were preliminary and were supplemented during the years following by the detailed reports. By 1855 Secretary of War Jefferson Davis was able to make his recommendation to Congress. He advocated the thirty-second parallel route as the most practicable of the four recommended to the War Department; it was the least costly route, the shortest, and the work upon it would be less interrupted by climate than upon any other route. Davis has been accused of allowing his sectional feelings to influence his judgment, but there can be no doubt that he was absolutely unpartisan in this respect. Upon the most northern survey he had expended almost double the amount given to any other section; but numerous explorations had demonstrated the superiority of the most southern.

Despite the added information for which Congress had asked in 1852, there was as little prospect in 1855 of building the road as there had been in 1850. Localism was even then giving way to slavery sectionalism, on account of which the South would oppose anything which would redound to the benefit of the north and *vice versa*. Moreover, the same deadlock still existed as to means of construction, whether private or national. The project suffered postponement, until, with the removal of southern opposition, the demand for a railroad could no longer be resisted and the first charter was granted in 1862.

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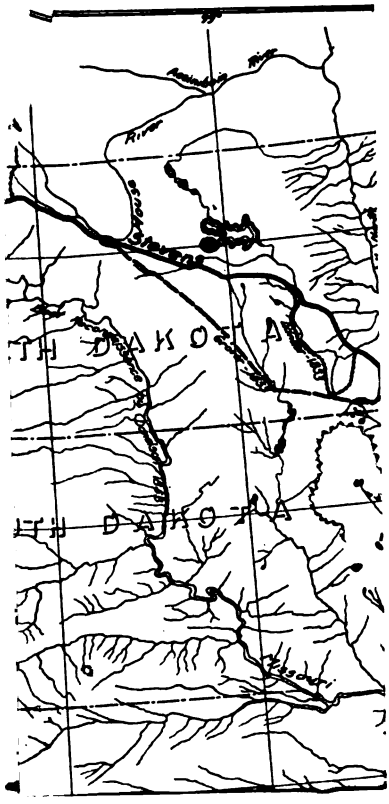
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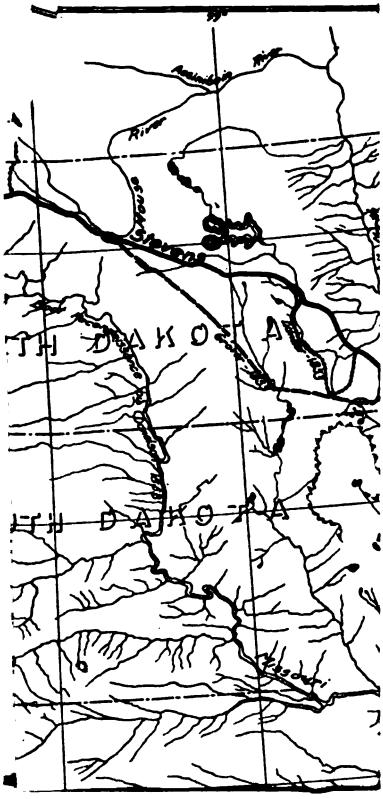
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